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ELEVENTH ANNUAL REPORT
OF THE
WATER COMMISSIONER



FOR THE YEAR ENDING
JANUARY 31, 1906

★
No 6355.52

11th
"

1905/06



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Boston Water Board.

ELEVENTH ANNUAL REPORT

OF THE

WATER COMMISSIONER

FOR THE

YEAR ENDING JANUARY 31, 1906

Printed for the Department



BOSTON
MUNICIPAL PRINTING OFFICE
1906

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11th,

1905/6

Boston Water Board.

May 10, 1909

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OFFICE OF THE WATER COMMISSIONER,
CITY HALL, BOSTON, March 1, 1906.

HON. JOHN F. FITZGERALD,
Mayor of the City of Boston:

SIR, — I submit herewith the eleventh annual report of the doings of the Water Department, covering the year ending January 31, 1906.

The receipts and disbursements of the department for the year were as follows:

Total receipts from all sources	\$2,989,079 81
Balance at beginning of the year (loan)	23,727 34
Total	<u>\$3,012,807 15</u>
Total expenditures for all purposes	2,985,805 51
Balance at end of the year (loan \$17,540.97),	<u><u>\$27,001 64</u></u>

TOTAL RECEIPTS OF THE YEAR BY SOURCES.

Sales of water	\$2,400,764 31
Service, elevator, fire, motor and stand pipes, and repairs, labor, materials, etc.	32,487 25
City's proportion of entrance fees from other cities and towns for use of Metropolitan water system,	16,163 59
Difference on cost of laying main pipes	3,433 30
Fees for summonses	1,953 75
Shutting off and letting on water, on account of repairs	1,684 50
Shutting off and letting on water, on account of non-payment of bills	1,254 00
Use of West Roxbury pumping plant	771 24
Board of City Engineer's horse	312 00
Interest on deposits	245 87
Use of land	10 00
	<u>\$2,459,079 81</u>
Credited from taxes	200,000 00
Loan (extension of mains)	330,000 00
	<u><u>\$2,989,079 81</u></u>

EXPENDITURES.

Current expenses	\$541,375 59
Metropolitan water assessment	1,758,635 00
Interest on funded debt	348,188 36
Extension of mains, etc. (from loans)	336,186 37
Refunded water rates	1,420 19
	<hr/>
	<u>\$2,985,805 51</u>

For detailed account of expenditures, condition of water debt, etc., see statements annexed.

Reports of work performed in the Income and Distribution Divisions and the Engineering Department will be found in the appendices annexed hereto.

Respectfully,

WILLIAM J. WELCH,
Water Commissioner.

Details of Expenditures under the appropriation for Current Expenses for the fiscal year ending January 31, 1906.
(From Revenue.)

Salaries and wages :

Eugene S. Sullivan, Commissioner	\$5,000 00	
Assistant Commissioners :		
Isaac Rosnosky	3,000 00	
John J. Leahy	3,000 00	
Chief Clerk and Secretary	3,000 00	
Employees	428,428 58	
		\$442,428 58

Stable :

Hay, grain, straw and board	\$6,867 14	
Vehicles and repairs	3,948 91	
Horseshoeing, veterinary services, etc.	3,082 84	
Horses, purchase of	2,475 00	
Harnesses and repairs	1,336 41	
		17,710 30

Meters :

New meters	\$14,619 00	
Repairs and extra parts	1,781 48	
		16,400 48

Tools, machinery and repairs of same, iron, steel, hardware and small supplies

Repairs and alterations of buildings, streets and structures,	14,651 83
Water pipes and other castings	6,950 93
Travelling expenses and transportation of employees	5,229 94
Printing	4,763 72
Lumber	3,795 38
Professional and expert services	2,929 33
Lead and lead pipe	2,843 00
Blasting and excavating pipe trenches	2,723 47
Fuel	2,671 02
Salt	2,173 45
Telephones	1,947 00
Stationery	1,613 11
Teaming and freights	1,446 00
Gravel and crushed stone	1,258 25
Thawing water pipes by electricity	1,066 38
Oils	912 62
Rents	629 32
Gasolene launch	525 00
Delivering same	\$500 00
	25 00
	525 00
Taxes	351 60
Gas	349 19
Cement and sand	294 65
Bricks	265 50
Salt hay	195 75
Waterproof clothing	143 58
Advertising	123 38
Furniture	70 15
Ice	51 40
Drain pipe	28 89
Premium on surety bonds	25 00

Damages \$537,093 20

4,282 39

\$541,375 59

Details of Expenditures under the appropriation for Extension of Mains, etc., for the fiscal year ending January 31, 1906. (From Loan.)

Employees	\$89,721 48
Water pipes and other castings	80,082 54
Tunnel under Mystic river, south channel, at Chelsea bridge, Charles A. Haskin	62,000 00
Tunnel under Fort Point channel at Dover street, Charles A. Haskin	29,424 00
Blasting and excavating pipe trenches and laying water pipes	18,931 35
Repairs and alterations of streets and structures	17,636 04
Lead and lead pipe	12,127 97
Tools, iron, steel and hardware	6,921 30
Teaming and freights	6,079 75
Lumber	5,748 80
Transportation of employees	2,259 55
Fender guard at Congress-street bridge, Charles A. Haskin, Fuel	1,600 00
Gravel and crushed stone	1,374 50
Tunnel under Fort Point channel at Congress street, Charles A. Haskin, balance	1,229 00
Oils	500 00
Bricks	170 37
Cement and sand	169 90
Drain pipe	144 65
	65 17
	<u>\$336,186 37</u>

There was also expended by the Water Department under an appropriation of \$5,000 made from the Reserve Fund for ice for drinking fountains. (Order of City Council approved July 7, 1905.)

Ice	\$4,082 98
Advertising	22 76
	<u>\$4,105 74</u>

COST OF CONSTRUCTION AND CONDITION OF THE WATER DEBT.

Cost of construction of Water Works to February 1, 1905	\$16,247,419 53
Cost of construction of Water Works to February 1, 1906	16,560,884 94
Increase during the year	<u>\$313,465 41</u>
Stock on hand February 1, 1905	\$143,012 97
Stock on hand February 1, 1906	112,537 72
Decrease during the year	<u>\$30,475 25</u>
The outstanding Water Loans February 1, 1905, were	\$8,224,000 00
The outstanding Water Loans February 1, 1906, were	6,671,250 00
Decrease during the year	<u>\$1,552,750 00</u>

WATER DEPARTMENT.

5

The Water Sinking-Fund February 1, 1905, was . . \$7,600,689 44
The Water Sinking-Fund February 1, 1906, was . . 5,943,222 39

Decrease during the year \$657,467 05

Net Water Debt February 1, 1905 \$623,310 56
Net Water Debt February 1, 1906 728,027 61

Increase during the year \$104,717 05

The outstanding Water Loans on February 1, 1906, were as follows :

Loans.		Date of	Amount.
per cent.	Currency,	Due April, 1906	
6	Gold Loan,	" April, 1906	\$6,750 00
5	"	" Oct., 1906	546,000 00
5	"	" Oct., 1906	1,548,000 00
6	Currency	" Oct., 1906	4,000 00
6	"	" Jan., 1907	1,000 00
6	"	" April, 1907	4,000 00
6	"	" July, 1907	1,000 00
5	Currency Loan,	" Oct., 1907	1,000 00
5	"	" April, 1908	10,000 00
4	Loan,	" July, 1909	70,000 00
4½	"	" Oct., 1909	268,000 00
4	"	" April, 1910	277,000 00
4	"	" April, 1912	324,000 00
4	"	" Oct., 1913	50,000 00
4	"	" Jan., 1914	459,000 00
4	"	" April, 1914	9,500 00
4	"	" Oct., 1914	10,000 00
4	"	" April, 1915	32,700 00
4	"	" Oct., 1915	17,000 00
4	"	" Jan., 1916	8,000 00
4	"	" April, 1916	18,500 00
4	"	" Oct., 1916	11,300 00
4	"	" Jan., 1917	8,000 00
3½	"	" April, 1917	275,000 00
4	"	" April, 1917	6,000 00
4	"	" Oct., 1917	158,700 00
4	"	" Jan., 1918	13,000 00
4	"	" April, 1918	300 00
3½	"	" July, 1918	100,000 00
4	"	" Oct., 1918	95,000 00
4	"	" April, 1919	200,000 00
3½	"	" Oct., 1919	2,000 00
4	"	" Oct., 1919	190,000 00
3½	"	" Nov., 1919	107,000 00
3½	"	" Jan., 1920	70,000 00
4	"	" Oct., 1920	181,500 00
4	"	" April, 1921	100,000 00
4	"	" Oct., 1921	140,500 00
4	"	" Jan., 1922	100,000 00
4	"	" April, 1922	75,000 00
4	"	" Oct., 1922	193,000 00
4	"	" Oct., 1923	18,275 00
4	"	" Oct., 1924	526,225 00
3½	"	" Oct., 1927	25,000 00
3½	"	" July, 1929	410,000 00

Total \$6,671,250 00

SUMMARY.

3½	per cent.	Loans	.	.	.	.	.	.	.	\$989,000 00
4	"	"	.	.	.	.	.	.	.	3,292,500 00
4½	"	"	.	.	.	.	.	.	.	268,000 00
5	"	Currency Loans	.	.	.	.	.	.	.	11,000 00
5	"	Gold "	.	.	.	.	.	.	.	2,094,000 00
6	"	Loans	.	.	.	.	.	.	.	16,750 00
Total										\$6,671,250 00

Cochituate Water Sinking-Fund Receipts.

[SINCE THE ESTABLISHMENT OF THE BOARD OF SINKING-FUND COMMISSIONERS IN 1871.]

YEAR.	From Tax Levy of City Income.	Interest on Investments.	Interest on Bank Deposits.	Water Rates, etc.	Premiums on Loans.	Other Sources.	Totals.
1871. April 30, received from Committee on Reduction of Debt.....	\$1,100,000 00	.....	.....	.....	.....	.....	\$1,100,000 00
1871-72.....	14,325 00 Taxes, 9,375 00	\$61,000 00	\$349 67	.....	.....	.....	85,049 67
1872-73.....	9,000 00	70,137 50	1,017 80	.....	.....	.....	80,155 30
1873-74.....	30,090 00	76,799 60	2,072 65	.....	.....	.....	108,962 25
1874-75.....	75,973 28	82,842 25	2,121 13	.....	.....	.....	160,936 66
1875-76.....	65,554 00	85,470 00	3,617 55	.....	.....	\$386 00	155,027 55
1876-77.....	234,314 00	86,245 66	4,119 47	\$26,480 18	.....	915 46	352,574 77
1877-78.....	Taxes, 214,500 00	85,830 86	10,802 31	27,099 92	.....	.....	338,240 08
1878-79.....	Taxes, 207,456 00	93,264 49	6,181 26	177,195 91	.....	9,874 21	493,971 87
1879-80.....	.....	90,472 42	5,087 62	214,707 24	.....	4,411 64	315,278 92
1880-81.....	.....	86,450 00	167 32	195,668 90	.....	1,762 04	284,058 26
1881-82.....	.....	96,546 35	2,767 90	193,840 36	.....	494 08	293,648 69
1882-83.....	.....	105,129 51	8,486 33	219,581 72	.....	1,241 04	331,438 60
1883-84.....	Taxes, 973 00	138,120 30	2,268 22	.....	.....	.....	141,362 12
1884-85.....	.....	143,649 45	7,510 40	209,258 39	.....	.....	359,818 24
1885-86.....	.....	156,694 01	5,804 31	120,129 12	.....	442 27	283,069 71
1886-87.....	Taxes, 75,496 00	181,264 89	2,644 70	297,928 95	.....	5,081 12	562,415 66
Carried forward.....	\$2,037,556 28	\$1,639,327 28	\$65,625 64	\$1,681,890 69	.....	\$24,607 86	\$5,446,008 35

Cochituate Water Sinking-Fund Receipts. — *Concluded.*

YEAR.	From Tax Levy of City Income.	Interest on Investments.	Interest on Bank Deposits.	Water Rates, etc.	Premiums on Loans.	Other Sources.	Totals.
<i>Brought forward</i>	\$2,037,556 28	\$1,639,327 28	\$65,625 64	\$1,681,890 69	.....	\$24,607 86	\$5,446,008 35
1887-88.....	199,883 90	4,178 16	221,620 11	.....	.....	425,682 17
1888-89.....	213,048 22	8,938 69	256,013 57	\$11,552 50	.....	489,572 98
1889-90.....	228,000 83	11,730 60	300,903 00	36,092 50	.....	576,726 93
1890-91.....	229,509 17	29,763 94	242,675 22	36,530 00	.....	538,478 33
1891-92.....	175,808 33	22,560 16	275,014 05	.....	78,865 00	552,247 54
1892-93.....	260,506 20	30,148 34	240,435 00	16,413 50	.....	547,503 04
1893-94.....	298,224 44	18,133 03	299,467 27	14,621 75	.....	630,446 49
1894-95.....	312,332 05	18,524 22	297,518 29	.....	9,894 12	638,268 68
1895-96.....	378,819 55	5,892 29	205,791 00	64,690 00	.....	655,192 84
1896-97.....	403,840 02	5,225 08	194,740 00	.....	616 50	604,421 60
1897-98.....	421,928 45	8,337 21	193,835 00	8,833 50	15,877 86	648,372 02
1898-99.....	417,142 02	5,806 85	193,395 00	.....	8,016 00	624,359 87
1899-1900.....	383,662 97	7,632 45	209,824 00	29,835 70	2,148 90	633,104 02
1900-1901.....	397,985 35	15,948 83	206,489 00	.....	.....	620,423 18
1901-1902.....	325,030 96	31,199 25	.....	.....	* 609,000 00	965,230 21
1902-1903.....	313,707 65	37,297 28	.....	.....	.....	351,004 93
1903-1904.....	149,255 27	8,318 82	.....	.....	282 10	157,856 19
1904-1905.....	260,239 40	5,547 25	.....	.....	.....	265,786 65
1905-1906.....	242,176 39	13,015 36	.....	.....	.....	255,191 75
	\$2,037,556 28	\$7,250,429 05	\$353,843 45	\$5,016,171 20	\$218,569 45	\$749,308 34	\$15,625,877 77

* Water Works Fund.

Cochituate Water Debt, Gross and Net.

At the Close of Each Fiscal Year.

Fiscal Year.	Gross Debt.	Sinking-funds.	Net Debt.
1847-48.....	\$2,129,056 32	.....	\$2,129,056 32
1848-49.....	3,787,328 98	.....	3,787,328 98
1849-50.....	4,463,205 56	.....	4,463,205 56
1850-51.....	4,955,613 51	.....	4,955,613 51
1851-52.....	5,209,223 26	.....	5,209,223 26
1852-53.....	5,972,976 11	.....	5,972,976 11
1853-54.....	5,432,261 11	.....	5,432,261 11
1854-55.....	5,403,961 11	.....	5,403,961 11
1855-56.....	5,230,961 11	.....	5,230,961 11
1856-57.....	5,031,961 11	.....	5,031,961 11
1857-58.....	4,724,961 11	.....	4,724,961 11
1858-59.....	4,754,461 11	.....	4,754,461 11
1859-60.....	3,846,211 11	.....	3,846,211 11
1860-61.....	3,455,211 11	.....	3,455,211 11
1861-62.....	3,012,711 11	.....	3,012,711 11
1862-63.....	2,992,711 11	.....	2,992,711 11
1863-64.....	2,992,711 11	.....	2,992,711 11
1864-65.....	2,942,711 11	.....	2,942,711 11
1865-66.....	3,152,711 11	.....	3,152,711 11
1866-67.....	3,370,711 11	.....	3,370,711 11
1867-68.....	3,867,711 11	.....	3,867,711 11
1868-69.....	5,107,711 11	.....	5,107,711 11
1869-70.....	5,731,711 11	.....	5,731,711 11
1870-71.....	6,482,711 11	\$1,100,000 00	5,382,711 11
1871-72.....	6,812,711 11	1,185,049 67	5,627,661 44
1872-73.....	6,912,711 11	1,268,234 97	5,644,476 14
1873-74.....	7,863,711 11	1,372,953 62	6,490,757 49
1874-75.....	8,123,711 11	1,533,890 28	6,589,820 83
1875-76.....	9,735,711 11	1,560,917 83	8,174,793 28
1876-77.....	11,548,711 11	1,709,492 60	9,839,218 51
1877-78.....	11,545,273 98	2,043,764 73	9,501,509 25
1878-79.....	11,753,273 98	2,143,847 85	9,609,426 13
1879-80.....	11,697,273 98	1,771,692 92	9,925,581 06
1880-81.....	11,631,273 98	1,989,300 88	9,641,973 10
1881-82.....	11,631,273 98	2,281,857 89	9,349,416 09
1882-83.....	11,955,273 98	2,607,768 46	9,347,505 52
1883-84.....	12,882,273 98	2,746,505 58	10,135,768 40
1884-85.....	13,045,473 98	3,106,323 82	9,939,150 16
1885-86.....	13,491,473 98	3,385,201 26	10,106,272 72
1886-87.....	14,142,273 98	3,947,616 92	10,194,657 06
1887-88.....	14,741,273 98	4,373,304 09	10,367,969 89
1888-89.....	14,941,273 98	4,864,092 54	10,077,181 44
1889-90.....	15,696,273 98	5,440,819 47	10,255,454 51
1890-91.....	16,267,773 98	5,979,297 80	10,288,476 18
1891-92.....	16,423,773 98	6,471,545 34	9,952,228 64
1892-93.....	16,758,773 98	7,019,058 38	9,739,715 60
1893-94.....	17,055,273 98	7,649,504 87	9,405,769 11
1894-95.....	17,761,273 98	8,444,773 55	9,316,500 43
1895-96.....	18,261,273 98	9,099,966 39	9,161,307 59
1896-97.....	18,261,273 98	9,704,387 99	8,556,885 99
1897-98.....	17,911,273 98	9,852,760 01	8,058,513 97
1898-99.....	17,121,273 98	9,487,119 88	7,634,154 10
1899-1900.....	17,306,273 98	9,870,223 90	7,436,050 08
1900-1901.....	11,960,273 98	10,144,647 08	1,815,626 90
1901-1902.....	11,351,917 28	10,422,449 77	929,467 51
1902-1903.....	9,501,000 00	8,893,615 94	607,384 06
1903-1904.....	8,227,000 00	7,337,902 79	889,097 21
1904-1905.....	8,224,000 00	7,600,689 44	623,310 56
1905-1906.....	6,671,250 00	5,943,222 39	728,027 61

¹ No account taken of amounts borrowed temporarily from 1846 to 1852 and afterwards funded by the issue of water bonds that figure in this statement.

* Dec. 16, 1905.	Charles A. Haskin.....	{ Tunnel for water pipe under Fort Point { channel at Dover-street bridge..... }	{ \$28,400, plus actual cost of dispos- ing of excavated materials..... }	29,424 00	29,424 00
Feb. 24,	J. H. McCafferty & Co..	{ Composition castings for year ending Janu- ary 31, 1906..... }	{ No. 1 @ 20 ¹ / ₁₆ cents per lb..... No. 2 @ 19 ⁹ / ₁₆ " " " "..... No. 3 @ 15 " " " "..... }	5,064 07	5,064 07
* Feb. 28,	Charles A. Haskin.....	{ Fender-guard around shaft of tunnel at { Congress-street bridge..... }	\$1,600.....	1,600 00	1,600 00
Mar. 1,	Foxboro Foundry Co....	{ Miscellaneous iron castings for year ending January 31, 1906..... }	{ No. 1 @ 2 ⁷ / ₁₆ cents per lb..... No. 2 @ 2 ¹⁰ / ₁₆ " " " "..... }	19,651 63	19,651 63
Mar. 1,	Hugh Nawn Contracting Co.....	{ Teaming water pipes and materials for year ending January 31, 1906..... }	{ 85 cents per ton, 2,000 lbs., for short haul..... \$1.45 per ton, 2,000 lbs., for long haul..... }	2,472 56	2,472 56
Mar. 22,	United States Cast Iron Pipe and Foundry Co.	{ 15 tons 3-inch pipe, B..... 30 " 4-inch " B..... 50 " 6-inch " B..... 175 " 8-inch " B..... 290 " 10-inch " B..... 850 " 12-inch " B..... 150 " 16-inch " B..... 75 " 24-inch " B..... 350 " 30-inch " B..... 15 " special castings..... }	{ @ \$29.70 per ton, 2,000 lbs..... @ \$27.20 " " " "..... @ \$26.20 " " " "..... @ \$26.20 " " " "..... @ \$25.20 " " " "..... @ \$25.20 " " " "..... @ \$25.20 " " " "..... @ \$24.70 " " " "..... @ \$24.70 " " " "..... @ \$52.50 " " " "..... }	38,486 72	38,486 72
* May 17,	Charles A. Haskin.....	{ Tunnel for water pipe across Mystic river, south channel, at Chelsea bridge, south..... }	{ \$60,000 if excavation is made in clay or fine sand..... \$20 per lineal foot for portions made in gravel or coarse sand.. }	62,000 00	62,000 00
* July 8,	Independent Ice Co.....	{ Furnishing ice for public drinking foun- tains in City proper, Charlestown and East Bos- ton, for season of 1905..... }	{ \$3 per ton, 2,000 lbs., for City proper and Charlestown..... \$3.50 per ton, 2,000 lbs., for East Boston..... }	1	1
* July 8,	Hygeia Ice Co.....	{ Furnishing ice for public drinking foun- tains in South Boston, Roxbury and West Roxbury for season of 1905..... }	\$3 per ton, 2,000 lbs.....	2	2

¹ \$2,849.83 paid from special appropriation. * \$1,233.15 paid from special appropriation.

**Contracts in Excess of \$1,000 Made and Pending during Year Commencing February 1, 1905, and ending
January 31, 1906.—Continued.**

Contracts marked thus () are completed.*

DATE.	CONTRACTORS.	WORK.	AMOUNT.	PAID ON CONTRACT.		
				Previous Year.	Year 1905- 1906.	Total.
* July,	John T. Cavanagh.....	{ Excavating and refilling trench, and rock excavation for 104 ft. of water pipe and 6 services, Bellevue avenue and Green street, Squantum..... }	\$1,600.....	.....	\$1,600 00	\$1,600 00
* Oct. 7,	Charles A. Haskin.....	{ Lightering pipes from Albany-street yard and furnishing machinery and materials for placing line of water pipes in Mystic tunnel..... }	\$1,950.....	.....	1,950 00	1,950 00
* Oct. 20,	Charles A. Haskin.....	{ Placing in position and securing 30-inch main in Mystic tunnel..... }	\$1,900.....	.....	1,900 00	1,900 00
* Nov. 1,	Charles A. Haskin.....	{ Placing in position and securing the two lines of water pipes in tunnel and shafts at Dover-street bridge..... }	\$1,911.....	.....	1,911 00	1,911 00
* Nov. 5,	Charles A. Haskin.....	{ Placing in position and securing water pipes in the two shafts of Mystic tunnel.. }	\$1,041.....	.....	1,041 00	1,041 00

REPORT OF INCOME DIVISION.

BOSTON, March 1, 1906.

MR. WILLIAM J. WELCH,

Water Commissioner:

DEAR SIR,—Herewith follows the annual report of the Income Division, Water Department. The report of the Meter Service Division covers the financial year ending January 31, 1906; the remainder of the report is rendered for the calendar year ending December 31, 1905 — it being impracticable, owing to the nature of our accounts, to render it for the financial year.

Respectfully submitted,

J. H. CALDWELL,

General Superintendent Income Division.

Table I.

Statement of Water Rates, January 31, 1906.

Account of Year.	Amount Assessed.	Amount Abated.	Amount Collected.	Balance Outstanding.
1894.....	\$2,163,625 70	\$51,615 19	\$2,112,006 01	\$4 50
1895.....	2,266,519 08	55,409 78	2,211,008 55	100 75
1896.....	2,568,246 04	*95,157 39	2,473,083 65	5 00
1897.....	2,630,413 37	53,864 09	2,576,549 28	.....
1898.....	2,342,804 58	† 235,414 43	2,107,390 15	.....
1899.....	2,414,731 72	† 258,319 16	2,156,246 26	16 306
1900.....	2,197,026 64	46,745 05	2,150,134 99	146 60
1901.....	2,264,845 26	46,481 68	2,218,090 98	272 60
1902.....	2,327,926 31	43,706 89	2,283,835 75	383 67
1903.....	2,386,407 21	56,941 81	2,327,886 31	1,579 09
1904.....	2,391,693 51	37,016 59	2,352,174 23	2,502 69
1905.....	2,445,784 92	18,398 57	2,393,625 42	33,760 93
1906.....	1,313,173 26	1,328 88	147,786 70	1,164,057 68

Above amounts for years 1894, 1895, 1896 and 1897 include both Cochituate and Mystic supply accounts. The contracts to supply Chelsea, Somerville and Everett with Mystic water were abrogated by the Metropolitan Water Act on January 1, 1898.

*This amount includes certain city department accounts, abated by order of the Mayor.

† These amounts include abatements of city department accounts, under order of the City Council, approved by the Mayor on March 5, 1900, said order also abolishing all charges for water used by city departments.

Table II.*Number of Classified Water Takers during 1905.*

	Number.
By annual rates	94,205
By meter rates	5,421
City supplies of all kinds	9,231
Total	108,857

Table III.*Kind and Number of Fixtures in use December 31, 1905.*

	Number.
Bath-tubs	84,259
Bowls	120,932
Foot-tubs	360
Sinks	188,281
Taps	31,260
Urinals, automatic	4,788
" otherwise	394
Wash-tubs	137,315
Water-closets	181,726
Total fixtures	749,315

Table IV.
Water at Annual Rates.

CLASSIFICATION.	Number.	Amount.
Armories.....	6	\$847 50
Bakeries.....	294	3,884 74
Bath-houses.....	1	17 00
Building purposes.....	782	8,096 25
Cemeteries.....	5	34 50
Churches.....	253	2,985 42
Clubs.....	210	3,125 42
Depots and stations.....	59	1,290 33
Dispensaries.....	9	155 50
Dwelling-houses.....	53,686	787,571 65
Fountains.....	6	62 50
Freight-houses.....	5	89 00
Greenhouses.....	54	881 75
Gymnasium.....	4	82 17
Halls.....	137	1,969 17
Hand hose.....	9,083	45,415 00
Hospital and asylums.....	64	4,746 50
Laboratories.....	3	96 50
Laundries.....	449	8,517 22
Libraries and museums.....	19	389 33
Manufactories.....	24	368 75
Model houses.....	13,449	295,490 39
Motors.....	8	52 50
Offices.....	1,813	13,230 85
Photographers.....	50	1,235 46
Police stations.....	2	25 00
Pool and bowling.....	103	1,322 33
Puddling trenches and paving.....	17	172 74
Razing buildings.....	7	57 00
Restaurants and lunch rooms.....	468	7,886 00
Saloons and bottling.....	510	19,102 13
Schools.....	79	1,594 50
Shops.....	3,046	28,778 70
Street watering.....	7	335 96
Shipping.....	12	129 13
Stables.....	3,087	21,370 60
Steam and gas engines.....	197	1,797 58
Steam crushers.....	2	40 00
Stores.....	6,191	68,685 45
Tanks.....	4	57 55
	94,205	\$1,331,990 07

Table V.

Water at Meter Rates.

CLASSIFICATION.	Number.	Quantity of Water Consumed. Cubic Feet.	Amount Assessed.
Armories	3	297,000	\$403 10
Bakeries	27	1,675,000	2,176 85
Bath-houses	11	870,000	1,154 70
Boarding-houses	100	6,137,000	8,148 80
Bottling establishments.....	43	3,425,000	4,512 60
Breweries.....	25	22,281,000	27,321 70
Cemeteries.....	5	905,000	1,129 20
Chemicals.....	8	462,000	627 60
Clubhouses	50	11,129,000	13,904 12
Distilleries	4	1,667,000	2,069 20
Electrical companies	8	20,038,000	19,710 70
Elevators and motors	520	37,589,000	48,987 77
Factories.....	259	49,015,000	62,249 76
Fish houses.....	31	1,953,000	2,567 95
Garages	12	1,246,000	1,647 30
Gas works	14	13,792,000	15,265 30
Greenhouses.....	10	801,000	1,050 60
Halls	24	1,940,000	2,526 12
Hospitals	18	11,878,000	14,180 50
Hotels	120	85,297,000	103,539 90
Ironworks	50	10,571,000	13,424 20
Laundries	65	17,885,000	22,133 28
Markets.....	2	129,000	177 80
Mills and engines.....	49	12,083,000	15,229 30
Model houses	1,261	81,541,000	109,833 84
Navy yard and barracks.....	2	20,333,000	20,434 42
Offices, stores and shops.....	1,696	186,889,000	243,000 87
Oil works.....	4	248,000	345 00
Pool and bowling	4	82,000	116 00
Public institutions.....	7	9,718,000	11,795 80
Saloons and restaurants.....	382	22,407,000	30,102 40
Schools.....	50	6,926,000	9,143 90
Slaughtering houses.....	4	1,621,000	2,014 30
Stables.....	356	16,033,000	22,148 00
Steam and street railways	52	112,119,000	199,023 92
Stone works	7	1,008,000	1,453 30
Sugar refineries.....	1	31,491,000	26,816 80
Tanneries.....	4	350,000	474 30
Theatres	21	5,313,000	6,957 90
Warehouses.....	26	7,153,000	8,901 60
Wharves and shipping.....	86	29,727,000	37,062 35
Totals.....	5,421	846,024,000	\$1,113,763 05

Table VI.*Number and Amounts of Abatements Allowed During the Year 1905.*

ON ACCOUNT OF YEAR.	Number.	Amount.
1901.....	2	\$20 00
1902	1	88
1903.....	1	60 46
1904.....	1,761	17,215 34
1905	2,520	17,784 78
Totals.....	4,285	\$35,081 46

The abatements allowed on account of 1905 assessments, amounting to \$17,784.78, were due to changes in occupancy of premises, changes in ownership, vacancies, errors in valuations and assessments, inaccuracy of meters as proved by tests, and for other reasons which, in the judgment of the General Superintendent, entitled the water-taker to consideration.

The abatements on account of years 1901, 1902, 1903 and 1904 were due to bills uncollectible, changes of ownership, failures, shut-off for non-payment and cleaning up of old accounts.

Table VII.*New Elevator, Motor and Service Pipes.*

Elevator pipes.....	17
Motor pipes.....	6
Fire pipes.....	33
Service pipes.....	1,169
Total.....	1,225

Table VIII.*Turning Water Off and On.*

For repairs of mains.....	786
For repairs of services.....	3,543
For non-payment of water bills.....	1,866
For waste.....	12
Turned on first time.....	1,060
Vacancies.....	3,029
Total.....	10,296

Table IX.

Off and On Receipts.

Received for turning water off and on for repairs, deposited with City Collector.	\$1,703 50
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Table X.

ELEVATOR, MOTOR, AND FIRE PIPE SERVICE, FOR THE YEAR
ENDING DECEMBER 31, 1905.

<i>Elevators.</i>	
Under supervision December 31, 1904	592
Discontinued during the year 14	
Changed to electric 4	
	—
	18
	—
New elevators inspected and accepted during the year	574
	16
	—
Under supervision December 31, 1905	590
Changed to tank and metered water and still under supervision	69
Inspections made	494
Accuracy tests made	327
Registering inaccurately and repaired by owners	59
Wasting water and repaired by owners	13
Clock cord broken and repaired by owners	41
Clock hands off or glass broken and repaired by owners	19
<i>Motors.</i>	
Under supervision December 31, 1904	124
Discontinued 4	
Changed to electric 2	
	—
	6
	—
New motors added to service during the year	118
	4
	—
Under supervision December 31, 1905	122
Motors on meter	18
Inspections made	136
Measured	91
Tested	110
Registering inaccurately and repaired by owners	13
Not registering and repaired by owners	11
Wasting water and repaired by owners	8
<i>Fire Service.</i>	
Premises under supervision December 31, 1904	501
Supervision discontinued	9
	—
	492
Premises equipped during the year	25
Premises under supervision December 31, 1905	517

Inspection of premises	3,349
Total number of inspections of outlet valves	38,206
Total number of hydrant inspections	860
Total number of valves sealed and resealed	3,627
Total number of hydrant valves sealed and resealed	138

By-passes.

Meter by-passes under supervision December 31, 1904	40
Discontinued	2
	—
	38
By-passes additional	1
	—
Under supervision December 31, 1905	39
	<u>39</u>
Inspections made	240
Resealed	18

Table XI.

WASTE DETECTION.

Water Inspection.

	Number.
Waste reports.....	11,525
First examinations.....	11,525
Second examinations.....	10,827
Third examinations.....	3,503
Fourth examinations.....	316
Fine notices issued.....	274

Table XII.*Defective Fixtures and Waste.*

	Number.
Tank fixtures leaking.....	9,235
Faucets leaking.....	5,094
Bursts inside.....	258
Bursts outside	34
Hopper-cocks leaking	19
Water-closets leaking.....	135
Wilful waste.....	37

Table XIII.*Statement of Meters for Year ending January 31, 1906.*

Meters belonging to department January 31, 1905	5,341
Purchased	319
	<hr/>
Condemned during year	5,660
	366
	<hr/>
Belonging to department January 31, 1906	<u>5,294</u>

Table XIV.*Distribution of Meters January 31, 1906.*

In service	4,990
At department shop	304
	<hr/>
	<u>5,294</u>

Table XV.*General Statement of Work Performed on Meters During Year ending January 31, 1906.*

	Meters.	Boxes.
Applied	398	69
Discontinued	179	.....
Changed	761	.....
Changed location	10	.....
Tested	1,798	.....
Repaired at shop	620	.....
Repaired at factory	61	.....
Repaired in service	316	246
Examined	350	.....
Abandoned . . . . .	.....	19
Hayed . . . . .	.....	1,501
Condemned	366	.....
Purchased	319	.....
Meters in service	4,990	.....
Private meters discontinued	1	.....
Private meters in service	53	.....
At department shop	304	.....

Table XVI.*Meters Applied.*

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....				4	4	3	6	.....	17
Crown.....	1	4	9	7	5	16	46	50	138
Hersey.....		1	9	43	42	47	84	.....	226
Metropolitan.....							11	.....	11
B. W. W.....							3	.....	3
Empire.....					2			.....	2
Disc. (Hersey).....					1			.....	1
Totals	1	5	18	54	54	66	150	50	398

Table XVII.*Meters Discontinued.*

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington				3	1	13	17	.....	34
Crown	1	1	4	3	1	9	22	47	88
Hersey			1	1	4	8	20	.....	34
Metropolitan						2	17	.....	19
B. W. W.....							3	.....	3
Gem.....		1						.....	1
Totals	1	2	5	7	6	32	79	47	179

Table XVIII.*Meters Purchased.*

	DIAMETER IN INCHES.						Totals.
	4	3	2	1½	1	¾	
Crown.....	3	5	.....	.....	6	16	30
Hersey	2	13	50	60	84	80	289
Totals	5	18	50	60	90	96	319

Table XIX.*Meters Repaired at Factory.*

	DIAMETER IN INCHES.							Totals.
	6	3	2	1½	1	¾	⅝	
Hersey.....	1	1	2	1	1	1	.....	7
Crown.....	.....	1	2	4	6	4	33	50
Disc. (Hersey).....	.....	1	1	1	.....	.....	.....	3
Empire.....	.....	.....	.....	1	.....	.....	.....	1
Totals.....	1	3	5	7	7	5	33	61

Table XX.*Meters Condemned.*

	DIAMETER IN INCHES.							Totals.
	4	3	2	1½	1	¾	⅝	
Metropolitan.....	.....	.....	.....	2	47	139	.....	188
Worthington.....	1	.....	5	5	47	37	.....	95
B. W. W.....	.....	.....	.....	.....	.....	2	.....	2
Hersey.....	.....	.....	.....	.....	.....	3	.....	3
Crown.....	.....	1	2	2	.....	9	64	78
Totals.....	1	1	7	9	94	190	64	366

Table XXI.*Meters Repaired in Service.*

CAUSE OF REPAIRS.	Number.	CAUSE OF REPAIRS.	Number.
Clock broken.....	47	<i>Brought forward.....</i>	270
Cover broken.....	30	Gears did not mesh.....	3
Glass broken.....	36	Gear loose.....	13
Ratchet broken.....	15	Gear bound.....	11
Spindle broken.....	2	Defaced.....	15
Leak at spindle.....	65	Fish in meter.....	1
Leak at coupling.....	73	Irregular registration.....	3
Leak at body.....	2		
<i>Carried forward.....</i>	270	Total.....	316

Table XXII.
Meters Changed.

CAUSE.	Number.	CAUSE.	Number.
Test.....	182	<i>Brought forward.....</i>	673
Irregular registration.....	133	Relocated	10
Rust.....	14	Defaced.....	6
Frost.....	22	Body leak.....	20
Heat.....	18	Coupling leak.....	4
Gravel.....	18	Rachet broken.....	14
Solder.....	36	Intermittent.....	4
Clock broken.	36	Intermediate worn.....	7
Intermediate broken.....	68	Piston bound..	5
Gear broken.....	9	Fish in meter.....	2
No force.....	54	Cover broken.....	4
Stoppage.....	32	Shaft broken.....	8
Gears did not mesh.....	18	Gear bound.....	4
Enlarged.....	33		
<i>Carried forward.....</i>	673	<i>Total.....</i>	761

Table XXIII
Meters in Service, January 31, 1906.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....	2	15	28	127	116	429	293	1	1,011
Crown.....	10	48	59	88	165	377	468	1,200	2,415
Hersey.....	7	13	38	127	155	264	369	20	993
Metropolitan.....				1	16	58	399	2	476
B. W. W.....							29		29
Lambert.....				1	2	1	4	4	12
Disc			5	5	12	2			24
Thomson							1	2	3
Empire					7	5	1		13
Nash.....			3		1	2	1	1	8
Gem.....	1	3							4
Trident						1			1
Torrent.....	1								1
<i>Totals.....</i>	21	79	133	349	474	1,139	1,565	1,230	4,990

Table XXIV.*Private Meters in Service, January 31, 1906.*

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown	6	2	2	5	10	3	2	4	34
Hersey		2	1	1					4
Worthington.....			2	5		3		2	12
B. W. W.....							1		1
Gem.....	2								2
Totals	8	4	5	11	10	6	3	6	53

Table XXV.

	PRIVATE METER DISCONTINUED.	Total.
Crown	1	1

Table XXVI.*Meters at Department Shop, January 31, 1906.*

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....		4	5	15	5	42	13	6	90
Crown	1	1		1	5	17	19	58	102
Hersey	1	2	2	9	16	11	3		44
Metropolitan.....				2		9	25		36
B. W. W.....							3		3
Lambert.....				1	1	1		2	5
Disc (Hersey).....			1		1				2
Nash.....							1	1	2
Gem.....	1	2	4	2					9
Trident.....						1			1
Rogers							1		1
Ball & Fitts.....			1	1			1		3
Thomson.....							1	4	5
Empire.....							1		1
Totals.....	3	9	13	31	28	81	68	71	304

Table XXVII.

Meters Belonging to Department, January 31, 1906.

Worthington, $\frac{5}{8}$ inch .	7		Thomson, $\frac{5}{8}$ inch .	6	
" $\frac{3}{4}$ " .	306		" $\frac{3}{4}$ " .	2	
" 1 " .	471				8
" $1\frac{1}{2}$ " .	121		Gem, 2 " .	2	
" 2 " .	142		" 3 " .	4	
" 3 " .	33		" 4 " .	5	
" 4 " .	19		" 6 " .	2	
" 6 " .	2				13
	<hr/>	1,101	Trident, 1 " .	.	2
Crown, $\frac{5}{8}$ " .	1,258		Empire, $\frac{3}{4}$ " .	2	
" $\frac{3}{4}$ " .	487		" 1 " .	5	
" 1 " .	394		" $1\frac{1}{2}$ " .	7	
" $1\frac{1}{2}$ " .	170				14
" 2 " .	89		Nash, $\frac{5}{8}$ " .	2	
" 3 " .	59		" $\frac{3}{4}$ " .	2	
" 4 " .	49		" 1 " .	2	
" 6 " .	11		" $1\frac{1}{2}$ " .	1	
	<hr/>	2,517	" 3 " .	3	
Hersey, $\frac{5}{8}$ " .	20				10
" $\frac{3}{4}$ " .	372		Disc (Hersey), 1 " .	2	
" 1 " .	275		" $1\frac{1}{2}$ " .	13	
" $1\frac{1}{2}$ " .	171		" 2 " .	5	
" 2 " .	136		" 3 " .	6	
" 3 " .	40				26
" 4 " .	15		Ball & Fitts, $\frac{3}{4}$ " .	1	
" 6 " .	8		" 2 " .	1	
	<hr/>	1,037	" 3 " .	1	
Metropolitan, $\frac{5}{8}$ " .	2				3
" $\frac{3}{4}$ " .	424		Torrent, 6 " .	.	1
" 1 " .	67		Rogers, $\frac{3}{4}$ " .	.	1
" $1\frac{1}{2}$ " .	16				
" 2 " .	3		Total .	.	<hr/> 5,294
	<hr/>	512			
B. W. W., $\frac{3}{4}$ " .	.	32			
Lambert, $\frac{5}{8}$ " .	6				
" $\frac{3}{4}$ " .	4				
" 1 " .	2				
" $1\frac{1}{2}$ " .	3				
" 2 " .	2				
	<hr/>	17			

REPORT OF THE DISTRIBUTION DIVISION.

OFFICE OF THE ASSISTANT COMMISSIONER,
710 ALBANY STREET, March 1, 1906.

WILLIAM J. WELCH, ESQ.,
Water Commissioner :

SIR, — I herewith submit in tabular form the annual report of the Distribution Division for the year ending January 31, 1906.

Respectfully,
JAMES P. LENNON,
Assistant Commissioner in Charge.

New Mains Laid.

Statement of Location, Size, Nominal Pressure, and Number of Feet Laid during the Year Ending January 31, 1906.

NOTE. — C. P. indicates City Proper; Rox., Roxbury; W. R., West Roxbury; Bri., Brighton; Dor., Dorchester; S. B., South Boston; E. B., East Boston; Chsn., Charlestown; Qui., Quincy; Win., Winthrop; B. H., Boston Harbor.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
*Across Washing- ton st.....	At West and Bedford sts.....	C. P.	24-in.	L.	12
*Congress-st. Tun- nel.....	Under Fort Point Channel.....	S. B.	"	L.	250
	Total 24-inch.....				262
Codman st.....	Bet. Washington st. and Dorchester ave.	Dor.	20-in.	H.	751
*Congress-st. Tun- nel.....	Under Fort Point Channel.....	S. B.	"	H.	250
	Total 20-inch.....				1,001
Boylston st.....	At Washington st. (connection be- tween 30-inch L. and 16-inch H.)....	C. P.	16-in.	H.	9
Massachusetts ave., north side,	At Harrison ave. (connection between 30-inch and 16-inch).....	"	"	L.	25
	Carried forward.....				34

* Dead.

New Mains Laid. — Continued.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				34
Southampton st..	At first waterway east from Magazine st.....	S. B.	16-in.	L.	49
" ..	At second waterway east from Magazine st.....	"	"	L.	112
" ..	At N. Y., N. H. & H. R.R. bridge, near Ellery st.....	S. B.	"	L.	170
	Total 16-inch.....				365
Washington st....	Between Boylston sq. and Boylston st. (connection between 20-inch and 12-inch)	C. P.	12-in.	L.	22
"	Bet. Boylston sq. and Boylston st.....	"	"	H.	18
Atlantic ave.....	" Oliver st. and Belcher lane.....	"	"	H.	360
Washington st....	" Boylston sq. and Boylston st.....	"	"	H.	48
Washington st. (west side).....	At Boylston st.....	"	"	H.	48
Washington st. (east side).....	Between Boylston and Essex sts.....	"	"	L.	38
Ruggles st. (east side)	At Cabot st. (connection between new 8-inch and old 12-inch).....	Rox.	"	L.	55
Brookline ave.	Bet. Audubon rd. and Fullerton st....	"	"	L.	729
Rogers ave.....	" Ruggles st. and Huntington ave...	"	"	L.	316
Eastbourne st....	Off Beech st.	W. R.	"	H.	282
Belgrade ave.....	Between Corinth st. and Dudley ave..	"	"	H.	482
"	" Rexhame st. and Anawan ave.	"	"	H.	881
"	At Malcolm st.....	"	"	H.	24
Hyde Park ave...	Over Stony brook.....	"	"	H.	80
Baker st.....	Between Vermont and Ellwood sts....	"	"	H.	120
Woodland rd.....	From Moss Hill rd.....	"	"	H.	970
Canterbury st....	Between Ashland and Newbern sts....	"	"	H.	220
Commonw'lth ave.,	" Harvard and Allston sts.....	Bri.	"	L.	656
Melton rd.....	Off Wallingford rd.....	"	"	H.	411
Warren st.....	Between Allston st. and Corey rd.....	"	"	H.	870
Codman st.....	At Dorchester ave.....	Dor.	"	H.	10
Topliff st.....	Between Bowdoin and Stonehurst sts.	"	"	H.	346
South st.....	Off Freeport st.....	"	"	L.	340
Woodlawn ave....	" West Selden st.....	"	"	H.	46
Frankfort st.....	Bet. Maverick and Gove sts.....	E. B.	"	L.	90
	<i>Carried forward</i>				7,462

New Mains Laid. — Continued.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				7,462
Orleans st.	Bet. Bennington st. and Neptune rd. . .	E. B.	12-in.	L.	390
Frankfort st.	“ Maverick and Gove sts.	“	“	L.	150
Swift st.	“ Bennington and Lubec sts.	“	“	L.	242
Lubec st.	From Swift st.	“	“	L.	180
Chelsea st.	At Scott's ct. (connection between 30-inch and 6-inch).....	Chsn.	“	L.	9
	Total 12-inch.				8,433
Case st.	Off Centre st.	W. R.	10-in.	H.	1,227
Moss Hill rd.	From Woodland rd.	“	“	H.	960
Arlington pl.	Off Arlington st.	Bri.	“	L.	602
Unnamed st.	Off Commonwealth ave., first north from Cummings rd.	“	“	H.	476
Callender st.	Off Blue Hill ave.	Dor.	“	H.	257
Delhi st.	Bet. Crossman st. and Oak Hill ave. . .	“	“	H.	187
Nay st.	Off Meridian st.	E. B.	“	L.	538
Cottage st.	“ Maverick st.	“	“	“	574
	Total, 10-inch.				4,821
Federal st.	At Milk st.	C. P.	8-in.	H.	116
Washington st. (west side)....	Between Summer and Franklin sts. . .	“	“	H.	183
Washington st. (west side)....	“ Temple pl. and Winter st.	“	“	H.	140
Ruggles st. (east side).....	“ Hampshire and Haskins sts. .	Rox.	“	L.	382
Ruggles st. (east side).....	“ Haskins and Westminster sts. .	“	“	L.	205
Farnham st.	“ Gerard and Magazine sts.	“	“	L.	125
Ruggles st. (east side).....	“ Westminster and Auburn sts. .	“	“	L.	271
Medfield st.	At Audubon rd.	“	“	L.	92
Montello st.	Between Colberg and Belgrade aves. .	W. R.	“	H.	362
Cornell st.	“ Eastbourne and Berry sts.	“	“	H.	24
Johnswood rd.	Off Prospect ave.	“	“	H.	96
Linden st.	At Belgrade ave.	“	“	H.	92
Beaufort rd.	Between Centre st. and Lakeville pl. .	“	“	H.	527
Grandview st.	Off Beech st.	“	“	H.	434
	<i>Carried forward</i>				3,049

New Mains Laid. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward.....</i>	.....	.....	.....	3,049
Chilton rd.....	Off Weld st.....	W. R.	8-in.	H.	190
Montebello rd....	Bet. Washington st. and Brookside ave.	"	"	H.	578
Bradford ter.....	Off Centre st.....	"	"	H.	252
Edgemont st.....	At Bradford terrace.....	"	"	H.	12
Whiting st.....	Off Baker st.	"	"	H.	484
Ellwood st	At Baker st.....	"	"	H.	5
Baker pl.	Off Baker st.....	"	"	H.	364
Asticou rd.....	Between Walk Hill and South sts	"	"	H.	384
Bradstreet ave....	Off Mt. Hope st.....	"	"	H.	120
Wachusett st.....	From Rodman st.	"	"	H.	170
Unnamed st.....	Bet. unnamed st., off Commonwealth ave., First north from Cummings rd., and Cummings rd.....	Bri.	"	H.	566
Kilsyth rd.	Between Colliston and Lanark rds....	"	"	H.	156
Colliston rd.....	" Lanark and Kilsyth rds.....	"	"	H.	232
Woodstock ave....	" Warren and Summer sts.....	"	"	H.	293
Summer st.....	" Woodstock ave. and Corey rd.	"	"	H.	258
Westwood st.....	" Wales pl. and Richfield st....	Dor.	"	H.	80
Levant st.....	" Geneva ave. and Tebroc st....	"	"	H.	315
Cameron st.	Off Dorchester ave.....	"	"	L.	330
Wellington rd. (North)	" Magnolia st.....	"	"	H.	178
Wellington rd. (South)	" "	"	"	H.	226
Hansborough st...	" Blue Hill ave.....	"	"	H.	241
Tesla st.....	Between River and Edgewater sts.	"	"	H.	217
Church st.....	" Winter and Bowdoin sts.	"	"	H.	396
Margaret st.....	Off Olney st.....	"	"	H.	230
Greenwood st....	Between Roxton and Brenton sts.....	"	"	H.	180
Newhall ave.....	" Adams st. and Newhall pl.....	"	"	H.	457
Columbia ave.....	" Mt. Vernon and Locust sts....	"	"	L.	65
Vaughan st.....	" Blue Hill ave. and Harvard st.	"	"	H.	90
Gates st.....	At Telegraph st.....	S. B.	"	H.	15
Beale rd.....	Between Standish rd. and Squantum st.....	Qui.	"	H.	170
	Total, 8-inch.....	.....	.....	.....	10,303

New Mains Laid. — *Concluded.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
Wiggin st.....	Bet. Tileston and North Bennet sts...	C. P.	6-in.	L.	58
Auburn pl.....	" Auburn st. and Oak Grove ter....	Rox.	"	L.	179
Sewall st.....	" Delle ave. and Tremont st.....	"	"	H.	135
Lakeville pl.....	At Beaufort rd.....	W. R.	"	H.	16
Huntington ave.	Bet. Canterbury st. and Richards ave..	"	"	H.	78
Biltmore st.....	At Lamartine st.....	"	"	H.	4
Otis pl.....	Off Norfolk st.....	"	"	H.	64
Irving st. (Stratford st.).....	" Anawan ave.....	"	"	H.	37
Cambridge ter....	Bet. Cambridge st. and Webster pl.....	Bri.	"	H.	116
Feneno ter.....	Off Holmes ave.....	"	"	L.	48
Drayton ave.....	Between Quincy and Bodwell sts.....	Dor.	"	H.	110
Tebroc st.....	" Bowdoin and Levant sts.....	"	"	H.	240
Patterson st.....	" Codman and Brooks sts.....	"	"	H.	12
South st.....	Off Freeport st.....	"	"	L.	10
Kingsdale st.....	" Bernard st.....	"	"	H.	67
Woodward-pk st..	Between Howard ave. and Folsom st..	"	"	H.	30
Queen st.....	Off King st.....	"	"	H.	200
Johnson pl.....	" River st.....	"	"	H.	253
Chelsea st.....	At Scott's court (connection between 30-inch and 6-inch).....	Chsn.	"	L.	6
Moon Island rd...	East of sewer gatehouse connection between Thompson's island 6-inch line and Moon island 12-inch line...	Qui.	"	H.	36
	Total, 6-inch.....				1,699
Bellevue st....	Between Bay and Green sts.....	Qui.	2-in.	H.	625
Green st.....	" Bellevue st. and the water....	"	"	H.	337
	Total, 2-inch.....				962

Old Mains Relaid.

Statement of Location, Size, Nominal Pressure, Number of Feet Laid, and Size of Mains Abandoned During the Year Ending January 31, 1906.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size Abandoned.
Boylston st.....	Bet. Bumstead ct. and Washington st.....	C. P.	36-in.	L.	119	30-in.
Boylston st.....	At Washington st.....	"	30-in.	L.	28	"
Tremont st.....	Bet. Massachusetts ave. and Davenport st.....	"	"	L.	860	"
Massachusetts ave. (north side)	At Harrison ave. connection between 30-inch and 16-inch....	"	"	L.	10	"
Southampton st....	At Second waterway from Magazine st.....	S. B.	"	L.	187	"
Mystic river tunnel and Mystic playgrounds	Bet. North shaft to tunnel located between third and fourth piers of Chelsea bridge (beyond Freight house No. 45 and the junction of Scott's ct. and Chelsea st.).....	Chsn.	"	L.	1,015	"
Under Chelsea bridge.....	Between piers Nos. 3 and 4.....	"	"	L.	37	"
	Total, 30-inch.....				2,137	
Washington st....	Bet. Water st. and Court ave....	C. P.	24-in.	L.	256	24-in.
Under Chelsea bridge.....	Between Piers Nos. 3 and 4.....	Chsn.	"	L.	32	"
	Total, 24-inch.....				288	
Washington st....	Bet. Boylston sq. and Boylston st.....	C. P.	20-in.	L.	5	20-in.
Washington st. (west side).....	At Boylston st. (at connection with 30-inch).....	"	"	L.	8	"
Dover street tunnel.....	Under Fort Point channel.....	S. B.	"	L.	290	"
	Total, 20-inch.....				303	
Washington st....	At Bennet st.....	C. P.	16-in.	L.	6	16-in.
Tremont st.....	Bet. Head pl. and Boylston st....	"	"	H.	150	8-in.
Boylston st.....	" Tremont and Washington sts.....	"	"	H.	387	"
Washington st.....	" Bedford and Avon sts.....	"	"	H.	89	12-in.
Harrison ave.....	At Northampton st.....	"	"	L.	37	"
	Carried forward.....				669	

Old Mains Relaid. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size Abandoned.
	<i>Brought forward</i>.....	.....	.....	.....	669	
Washington st.....	Bet. Norfolk pl. and Avon st.....	C. P.	16-in.	H.	225	12-in.
Harrison ave.....	" Northampton and East Dedham sts.....	"	"	L.	2,242	"
*Dover st..	" Washington st. and Harrison ave.....	"	"	H.	312	"
Dudley ave.....	Across Belgrade ave.....	W. R.	"	H.	50	16-in.
Dover-st. tunnel..	Under Fort Point channel.....	S. B.	"	H.	210	12-in.
Water st.....	Between Wapping st. and Charles River ave.....	Chsn.	"	L.	1,016	8 & 12-in.
Wapping st.....	At Water st.	"	"	L.	28	12-in.
Chambers st.....	Between City sq. and Water st..	"	"	L.	332	6-in.
	Total, 16-inch.....	.....	.....	.....	5,084	
Washington st....	Between Boylston sq. and Boylston st.....	C. P.	12-in.	L.	4	12-in.
"	Between Boylston sq. and Boylston st. (south of connection between 20-inch and 12-inch) ..	"	"	L.	4	"
Federal st.....	At Milk st.....	"	"	L.	117	8-in.
Boylston st.....	Between Bumstead ct. and Washington st.....	"	"	L.	60	12-in.
Northampton st...	Across Tremont st.....	"	"	L.	43	6-in.
Tremont st.....	At Northampton st. (connection between 12-inch and 30-inch) ..	"	"	L.	9	12-in.
Boylston st.....	Across Tremont st.	"	"	H.	22	8-in.
Allen st.....	Bet. Blossom and Chambers sts..	"	"	L.	517	6-in.
Washington st....	" Bedford and Avon sts.....	"	"	H.	15	12-in.
Northampton st...	" Washington st. and Harrison ave.....	"	"	L.	697	"
Essex st.....	" Washington st. and Oxford st.....	"	"	L.	360	8-in.
"	" Washington st. and Harrison ave.....	"	"	H.	185	"
Harrison ave.....	At Essex st.....	"	"	L.	30	6-in.
Tileston st.....	Bet. Hanover and Salem sts.....	"	"	L.	592	"
Washington st. North.....	" Cross and Stillman sts.....	"	"	L.	267	"
Stillman st.....	At Washington st. North.....	"	"	L.	27	"
Essex st.....	Between Washington st. and Harrison ave.....	"	"	L.	12	12-in.
	<i>Carried forward</i>.....	.....	.....	.....	2,961	

* Dead.

Old Mains Relaid.— *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size Abandoned.
	<i>Brought forward</i>.....	.....	.....	.....	2,961	
Essex st.....	Between Washington st. and Harrison ave.....	C. P.	12-in.	H.	46	8-in.
Tyler st.....	“ Beach and Harvard sts....	“	“	L.	620	6-in.
Albany st.....	“ E. Springfield st. and Massachusetts ave.....	“	“	L.	227	12-in.
Harrison ave.....	“ Northampton and E. Dedham sts.....	“	“	L.	275	“
East Newton st....	At Harrison ave. (east side)....	“	“	L.	45	8 & 12-in.
E. Brookline st....	“ “ “	“	“	L.	8	12-in.
Massachusetts ave. (west side),	“ “ “	“	“	L.	7	“
Blackstone st.....	Bet. Hanover and Cross sts.....	“	“	L.	506	6-in.
Cross st.....	At Haymarket sq.....	“	“	L.	6	12-in.
Washington st....	Bet. Essex st. and Hayward pl..	“	“	H.	20	“
Eliot st.....	“ Washington and Pleasant sts.	“	“	L.	1,245	6 & 8-in.
Moreland st.....	“ Blue Hill ave. and Perrin st.	Rox.	“	H.	290	6-in.
Rogers ave.....	“ Ruggles st. and Huntington ave.	“	“	L.	1,187	“
Belgrade ave.....	West of Dudley ave., between Dudley ave. and Newburg st..	W. R.	“	H.	13	12-in.
“	Bet. Corinth st. and Dudley ave..	“	“	H.	1,388	8 & 10-in.
“	At Malcolm st.....	“	“	H.	8	12-in.
“	East side of Rexhame st.....	“	“	H.	45	“
Commonwealth ave.....	Bet. Harvard and Allston sts....	Bri.	“	L.	5	“
Greenwich st.....	“ Freeport and Duncan sts...	Dor.	“	L.	869	6-in.
Park st.....	“ Clayton st. and Dorchester ave.....	“	“	L.	621	“
Dorchester st.....	Near Fourth st.....	S. B.	“	L.	5	12-in.
E street.....	At Sixth st.....	“	“	L.	8	6-in.
C street.....	“ “ “	“	“	L.	8	“
E st.....	Across Fourth st.....	“	“	L.	56	“
Dover-st. tunnel..	Under Fort Point channel.....	“	“	H.	92	12-in.
Gove st.....	At Bremen st.....	E. B.	“	L.	14	10 & 12-in.
Hudson st.	Bet. Chelsea and Water sts.....	Chsn.	“	L.	295	3 & 6-in.
	<i>Carried forward</i>.....	.....	.....	.....	10,870	

Old Mains Relaid. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size Abandoned.
	<i>Brought forward</i>				10,870	
Water st.....	Bet. Wapping st. and Charles River ave.....	Chsn.	12-in.	L.	136	8 & 12-in.
Chelsea st.....	At Chambers st.....	"	"	L.	5	12-in.
	Total 12-inch.....				11,011	
Village st.....	Bet. Dover and Castle sts	C. P.	10-in.	L.	884	6-in.
Reed st.....	At Northampton st....	"	"	L.	62	"
Hayward pl.....	Bet. Washington st. and Harrison ave	"	"	H.	198	2 & 8-in.
Chatham st.	Bet. Commercial st. and Merchants row.....	"	"	L.	569	6-in.
East Springfield st.	At Albany st.....	"	"	L.	7	10-in.
Savoy st.....	Bet. Washington st. and Harrison ave.....	"	"	L.	332	8-in.
East Dedham st...	Across Harrison ave.....	"	"	L.	71	6-in.
East Springfield st.	At Harrison ave.....	"	"	L.	5	10-in.
Sharon st.....	" " "	"	"	L.	47	6-in.
Carver st.....	" Eliot st.....	"	"	L.	5	10-in.
Perrin st.....	Bet. Moreland and Waverly sts..	Rox.	"	H.	369	6-in.
Waverly st	" Perrin and Warren sts....	"	"	H.	543	"
Perrin st.....	" Moreland and Waverly sts..	"	"	H.	312	"
"	" Alaska and Moreland sts..	"	"	H.	451	"
Sixth st.....	" C and E sts.....	S. B.	"	L.	1,172	"
Bremen st.....	At Maverick st.....	E. B.	"	L.	20	"
Mill st.....	Bet. Webster and Sumner sts....	"	"	L.	302	"
Webster st.....	" Lewis and Mills sts	"	"	L.	415	"
Foss st.....	" Chelsea and Water sts	Chsn.	"	L.	347	"
Charlestown bridge.....	Approach from Chambers st....	"	"	L.	179	"
Under Chelsea bridge.....	Bet. 12-inch connection bet. B. W. D. 24-inch and 16-inch B. & M. R. R. private line, and freight house No. 45.	"	"	L.	30	24-in.
	Total 10-inch.....				6,320	
Paul st.....	Across Village st.....	C. P.	8-in.	L.	50	6-in.
McLean st.....	Bet. Blossom and Chambers sts.	"	"	L.	541	"
Unity st.....	At Tileston st.....	"	"	L.	8	"
	<i>Carried forward</i>				599	

Old Mains Relaid.-- *Concluded.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size Abandoned.
	<i>Brought forward</i>				599	
Stoughton st.....	At Harrison ave.....	C. P.	8-in.	L.	56	6-in.
Massachusetts ave. (south side).....	" " (west side)	"	"	L.	20	"
Warrenton st.....	" Eliot st.....	"	"	L.	61	"
Delle ave.....	Bet. Parker and Burney sts.....	Rox.	"	H.	424	4 in.
Belgrade ave.....	East side of Corinth st.....	W.R.	"	H.	15	8-in.
Amherst st.....	At Belgrade ave.	"	"	H.	50	6-in.
Vaughan st.....	Bet. Blue Hill ave. and Har vard st.....	Dor.	"	H.	36	"
Fourth st.....	Bet. E and Dorchester sts.....	S.B.	"	L.	1,184	"
Warren ave.....	" Front st. and drawbridge..	Chsn.	"	L.	235	"
Charles River ave., Under Chelsea bridge.....	" Water st. and water front..	"	"	L.	291	6 & 8 in.
	Bet. 12-inch connection bet. B. W. D. 24-inch and 16-inch private line B. & M. R.R., and freight house No. 45.....	"	"	L.	94	24-in.
	Total 8-inch.....				3,059	
Bumstead ct.....	At Boylston st.....	C.P.	6-in.	H.	14	6-in.
McLean ct.....	" McLean st.....	"	"	L.	27	4-in.
Division st.....	" Northampton st.	"	"	L.	4	6-in.
Wiggin st.	" Tileston st.....	"	"	L.	3	"
Salutation st.....	Bet. Hanover and Commer- cial sts.....	"	"	L.	350	4-in.
Bay View pl.....	At Rogers ave.....	Rox.	"	L.	12	6-in.
Rexhame st.....	" Belgrade ave.....	W.R.	"	H.	4	"
Fenton pl.....	" Greenwich st.....	Dor.	"	L.	6	"
Fourth st.....	" B st.....	S.B.	"	L.	4	"
Marion st.....	" Bremen st.....	E.B.	"	L.	12	"
Maudlin st.....	" Foss st.....	Chsn.	"	L.	31	4-in.
Chelsea st.....	" Scott's ct.....	"	"	L.	6	3-in.
	Total 6-inch.....				473	
Chelsea st.	At Scott's ct.....	Chsn.	3-in.	L.	10	3-in.
Hayward pl.....	Bet. Washington st. and Har- rison ave.	C.P.	2-in.	H.	108	8-in.

Mains Relocated.

Statement of Location, Size, Nominal Pressure, Number of Feet Laid During the Year Ending January 31, 1906.
Size of Main before Relocation, and Explanatory Remarks.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.	Size before Relocation.	Remarks.
Boylston st.....	At Washington st.....	C.P.	30-in.	L.	65	30-in.	Raised on account of subway construction.
Geneva ave.....	Between Columbia road and Olney st.....	Dor.	"	H.	343	"	Lowered on account change of street grade.
	Total, 30-inch.....				<u>408</u>		
Water st.....	Between Washington and Devonshire sts.	C.P.	24-in.	L.	203	24-in.	Moved from Washington st. on account of subway.
Essex st.....	At Washington st.....	"	20-in.	L.	30	"	Moved from Washington st. on account of subway.
Washington st.....	Between Elliot st. and Boylston sq.....	"	"	L.	154	20-in.	Moved out of way of subway.
"	" La Grange and Boylston sts.....	"	"	L.	145	"	Lowered, too shallow.
" (west side)	At Boylston st. (at connection with 30-inch)	"	"	L.	17	"	Raised on account of subway.
Columbus ave.....	Between Morgan and Clarendon sts.....	"	"	H.	165	"	Lowered to straighten line.
	Total, 20-inch.....				<u>511</u>		
Washington st.....	Between Summer and Franklin sts.....	C.P.	16-in.	H.	131	8-in.	Moved easterly on account of subway.
"	" Avon and Summer sts.....	"	"	H.	359	12-in.	" " " "
Winter st.....	At Washington st.....	"	"	H.	52	16-in.	Moved on account of changes caused by subway.
Washington st.....	" School st.	"	"	H.	12	12-in.	Moved on account of subway.

School st.....	At Washington st.....	"	H.	31	12-in.	"	"
Washington st.....	Across Milk st.....	"	H.	48	12 and 8-in.	"	"
"	Between Water st. and Court ave.....	"	H.	82	8-in.	"	"
"	" Summer and Franklin sts.....	"	H.	223	"	Moved easterly on account of subway.	
"	" Milk and School sts.....	"	H.	37	12-in.	"	on account of subway.
"	" "	"	H.	26	"	"	"
Kneeland st.....	At Washington st.....	"	L.	35	16-in.	"	"
West st.....	" "	"	H.	47	"	"	"
Dudley ave.....	Across Belgrade ave.....	W.R.	H.	120	"	Raised; grade of street changed.	
Melcher st.....	At A st.....	S.B.	L.	12	"	"	on account of sewer.
Congress st.....	" "	"	L.	12	"	"	"
A st.....	" Congress st.....	"	L.	22	"	"	"
	Total, 16-inch.....			<u>1,249</u>			
Washington st.....	Between School and Water sts.....	C.P.	H.	10	12-in.	"	subway.
"	" Milk and School sts.....	"	H.	4	"	Moved	"
"	At Water st.....	"	H.	15	"	Raised over 24-inch line on account of subway.	
Boylston st.....	" Kneeland st. (north side)	"	L.	36	"	Moved on account of subway.	
	" Washington st.....	"	L.	48	"	"	"
Washington st.....	Between Water st. and Williams ct.....	"	H.	130	"	"	"
"	At south side of Summer st.....	"	H.	7	"	Lowered	"
Bedford st.....	" Washington st.....	"	H.	20	"	Moved	"
	Carried forward.....			<u>270</u>			

Mains Relocated. — Continued.

LOCATION.	District.	Size.	Nominal Pressure.	Number of Feet.	Size before Relocation.	Remarks.
<i>Brought forward.</i>						
Washington st	C. P.	12-in.	H.	270	12-in.	Raised on account of subway.
Water st.....	"	"	L.	140	"	Restored, was temporarily abandoned on account of subway.
Spring lane	"	"	H.	34	"	Moved on account of subway.
Washington st	"	"	H.	125	"	Raised " "
La Grange st.....	"	"	L.	54	6-in.	Moved " "
Boylston sq.....	"	"	H.	13	8-in.	" " "
Beach st.....	"	"	H.	7	"	" " "
Summer st.....	"	"	L.	5	12-in.	Removed pipe out of way of subway.
Washington st	"	"	H.	3	"	Moved on account of subway.
Summer street	"	"	H.	14	"	" " "
Temple place.....	"	"	H.	36	"	" " "
Washington st. (east side)	"	"	L.	38	"	" " "
Essex st.....	"	"	L.	106	8-in.	" " "
Franklin st.....	"	"	H.	16	12-in.	" " "
Ruggles st. (west side)....	Rox.	"	L.	388	"	" " sewer.
Haskins st	"	"	L.	3	"	" " "

Tremont st.....	" Huntington ave..	"	H.	8	"	Lowered	"
Fort ave.....	" Beech Glen st.....	"	H.	8	"	Raised	"
Huntington entrance (west side).....	Between Huntington ave. and Fenway....	"	L.	866	"	Moved on account of Art Museum.	
Huntington entrance (east side).....	" " " "	"	L.	326	"	"	"
Beacon st.....	At Audubon rd.....	"	L.	18	"	Raised	" sewer.
Ruggles st. (west side)....	Between Warwick st. and Oak Grove ter....	"	L.	352	"	Moved	"
Vancouver st.....	At Ruggles st.....	"	L.	4	"	Raised	"
Westminster st.....	" " " "	"	L.	33	"	Moved	"
Humboldt ave.....	" Brookledge st.....	"	H.	6	"	Raised	"
Hyde Park ave.....	Between Mt. Hope st. and Hadwin way....	W.R.	H.	92	"	Moved. Street widened.	
Centre st.....	At Billings st.....	"	H.	25	"	Lowered on account of sewer.	
Warren st.....	Bet. Cambridge st. and Commonwealth ave.	Brl.	H.	200	"	" grade of street changed.	
Dorchester ave.....	At Codman st.....	Dor.	H.	18	"	" on account of new 20-in. line.	
Geneva ave.....	Between Columbia rd. and R.R. bridge.....	"	H.	138	"	" grade of street changed.	
Ballou ave.....	At Willowwood st.....	"	H.	21	"	" on account of sewer.	
Sleeper st.....	" Congress st.....	S.B.	L.	8	"	Raised	"
" " " "	" " " "	"	L.	8	"	"	"
A street.....	" " " "	"	L.	25	"	"	"
Chelsea st.....	165 feet east of Curtis st.....	E. B.	L.	18	"	Lowered on account of Cahill Construction Company.	
Neptune rd.....	Between Orleans and Frankfort sts.....	"	L.	222	8-in.	Raised on account of grade crossing abolishment.	
<i>Carried forward.</i>				3,655			

Mains Relocated. — Continued.

LOCATION.	District.	Size.	Nominal Pressure.	Number of Feet.	Size before Relocation.	Remarks.
<i>Brought forward.</i>				3,655		
Bennington st.....	E. B.	12-in.	L.	551	6-in.	Raised and moved on account of grade crossing abolishment.
Neptune rd.....	"	"	L.	170	8-in.	Raised and moved on account of grade crossing abolishment.
Total 12-inch.....				<u>4,376</u>		
At Washington st.....	C. P.	10-in.	H.	100	8-in.	Moved on account of subway.
" Tremont st.....	"	"	L.	28	10-in.	Raised over 30-inch line.
" Ruggles st.....	Rox.	"	L.	12	6-in.	Moved on account of sewer.
" east side of Ruggles st.....	"	"	L.	12	"	"
" west " " ".....	"	"	L.	7	"	"
Delhi st.....	Dor.	"	H.	87	"	To conform to line of pipe.
Total 10-inch.....				<u>246</u>		
Near Beach st.....	C. P.	8-in.	L.	10	8-in.	Offset round manhole.
Boylston st....	"	"	H.	35	"	Moved on account of subway.
Water st.....	"	"	H.	150	"	Raised and moved on account of subway.
Boylston sq.....	"	"	H.	7	"	Moved on account of subway.
Washington st.....	"	"	H.	90	12 in.	"

	H.	I.	S.in.	"	"	"
"	H.	I.	S.in.	"	"	"
Harvard pl.....	H.	30	4-in.	"	"	"
Calumet st.....	Rox.	8	S.in.	Lowered on account of sewer,		
Ashland st.....	W. R.	36	"	Lowered. Too shallow.		
Mendum st.....	"	132	"	Raised. Grade of street changed.		
Fairview st.....	"	83	"	" " "		
Puritan ave.....	Dor.	12	"	Lowered on account of sewer.		
Curtis st.....	E. B.	96	"	Lowered on account of grade crossing abolishment.		
Bennington st.....	"	325	"	Raised and moved on account of grade crossing abolishment.		
"	"	29	6-in.	Raised and moved on account of grade crossing abolishment.		
Point Shirley shore.....	Win.	130	S.in.	Lowered as protection from tide.		
Total 8-inch.....		1,184		In way of subway.		
Bennet st.	C. P.	24	6-in.	Moved on account of subway.		
Avon st.....	"	22	"	" " "		
Milk st.....	"	10	"	" " "		
La Grange st.....	"	90	"	" " "		
Westfield st.....	"	10	"	Raised over 30-inch line.		
Warwick st.....	Rox.	6	"	Moved on account of sewer.		
St. Paul st.....	"	28	"	Lowered under Christian Science Church subway.		
Arundel st.....	"	10	"	Raised on account of sewer.		
Ivy st.....	"	10	"	" " "		
Carried forward..		210				

Mains Relocated. — Concluded.

LOCATION.	District.	Size.	Nominal Pressure.	Number of Feet.	Size before Relocation.	Remarks.
<i>Brought forward.</i>				210		
Oak Grove ter.....	Rox.	6-in.	L.	5	6-in.	Moved on account of sewer.
Ruggles st.....	"	"	L.	8	"	Raised "
Maple st.....	W. R.	"	H.	12	"	Lowered under 20-inch main.
Kingdale st	Dor.	"	H.	301	"	" grade of street changed.
Vaughan st.....	"	"	H.	33	"	" " "
Roslin st.....	"	"	H.	7	"	" on account of sewer.
Kinco st.....	"	"	H.	8	"	Raised "
Willowwood st.....	"	"	H.	36	"	Offsetting over; around and under sewer.
Rockford st.....	"	"	L.	135	"	Raised on account of sewer.
Bennington st.....	E. B.	"	L.	6	"	Raised on account of grade crossing abolishment.
Bremen st.....	"	"	L.	36	"	Lowered on account of grade crossing abolishment.
Bennington st.....	"	"	L.	350	"	Raised on account of grade crossing abolishment.
Long Island.	B. H.	"	H.	135	"	Lowered as a protection from tide.
Total 6-inch				1,282		
Essex st.....	Bri.	4-in.	L.	9	4-in.	Straightened main.
Rockford st	Rox.	3-in.	L.	404	6-in.	Moved out of way of sewer. Laid in sidewalk.

Statement of Private Pipe Laid During the Year Ending January 31, 1906.

(Not included in statement of total length of Boston Water Department System.)

FOR WHOM.	Where.	District.	Size.	Nominal Pressure.	Number of Feet.
*Institutions Dept	Deer Island. From a point opposite the old laundry building to the new reservoir on the hill	B. H.	12-in.	L.	1,681
*Institutions Dept	Deer Island. From a point on the 12-inch line about 725 feet from roadway at the old laundry building towards the wharf or landing.....	"	8-in.	L.	17
Institutions Dept	Deer Island. In yard of men's new prison	"	6-in.	L.	355
†Institutions Dept	Long Island. Opposite Nurses' Home,	"	"		216

* Dead.

† Salt water mains.

Mains Abandoned.

Statement of Location, Size, Nominal Pressure, and Number of Feet Abandoned During the Year Ending January 31, 1906.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
Boylston st.....	At Washington st.....	C.P.	30-in.	L.	28
"	" "	"	"	L.	65
Washington st....	Between Milk and Bolyston sts.....	"	"	L.	25
Boylston st.....	" Bumstead ct. and Washington st.	"	"	L.	119
Massachusetts av. (north side.)... .	At Harrison ave. (connected between 30-inch and 16-inch	"	"	L.	10
Geneva ave.....	Between Columbia rd. and Olney st....	Dor.	"	H.	343
Southampton st...	At second waterway from Magazine st.	S.B.	"	L.	190
Under Chelsea bridge and south channel of Mystic river.....	Between north shaft to new tunnel and junction of Scott's ct. and Chelsea st.	Chsn.	"	L.	970
Under Chelsea bridge.	Between Piers No. 3 and No. 4.....	"	"	L.	37
Total 30-inch.....					1,787
Water st.....	Bet. Washington and Devonshire sts..	C.P.	24-in.	L.	10
Washington st....	" Milk and Boylston st.....	"	"	L.	2,040
Carried forward.....					2,050

Mains Abandoned. — Continued.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				2,050
Washington st....	At Milk st.....	C.P.	24-in.	L.	50
“	Between Water st. and Court ave....	“	“	L.	256
“	“ “ Milk st.....	“	“	L.	300
Under Chelsea bridge.....	“ Piers No. 3 and No. 4.....	Chsn.	“	L.	32
	Total 24-inch.....				2,688
Washington st....	Between Boylston sq. and Boylston st.	C.P.	20-in.	L.	5
Washington st. (west side).....	At Boylston st. (at connection with 30-in.).....	“	“	L.	10
Washington st. (west side).....	At Boylston st. (at connection with 30-inch).....	“	“	L.	17
Washington st....	Between Eliot st. and Boylston sq....	“	“	L.	150
“	“ La Grange and Boylston sts...	“	“	L.	145
Columbus ave....	“ Morgan and Clarendon sts....	“	“	H.	165
Dover st.....	Under Fort Point Channel (old syphon pipe).....	S.B.	“	L.	175
	Total 20-inch.....				667
Kneeland st.....	At Washington st.	C.P.	16-in.	L.	35
Milk st.....	“ “ “	“	“	L.	31
Bedford st.....	“ “ “	“	“	L.	45
Washington st....	“ Bennet st.....	“	“	L.	6
West st.....	“ Washington st.....	“	“	H.	47
Winter st.....	“ “	“	“	H.	38
Dudley ave.....	Across Belgrade ave.....	W.R.	“	H.	50
“	“ “	“	“	H.	120
Melcher st.....	At A st.....	S.B.	“	L.	12
Congress st.....	“ “	“	“	L.	10
A st.....	“ Congress st.....	“	“	L.	14
	Total 16-inch				408
Washington st....	Bet. Boylston sq. and Boylston st.....	C.P.	12-in.	L.	4
“	Bet. Boylston sq. and Boylston st. (south of connection bet. 20 and 12) ..	“	“	L.	4
“	Between Boylston and Beach sts.....	“	“	H.	130
“	At Water st.....	“	“	H.	12
Boylston st.....	“ Washington st.....	“	“	L.	48
	<i>Carried forward</i>				198

Mains Abandoned. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				198
Washington st. (east side).....	At Boylston st.....	C.P.	12-in.	L.	38
Boylston st	Across Washington st.....	"	"	L.	60
Franklin st.....	At Washington st.....	"	"	L.	40
Summer st.....	" "	"	"	L.	70
Avon pl.....	" "	"	"	L.	18
Boylston st.....	Bet. Bumstead ct. and Washington st..	"	"	L.	65
Tremont st.....	At Northampton st....	"	"	L.	9
Washington st....	Between Court ave. and Water st.....	"	"	L.	90
" ..	" Bedford and Avon sts.....	"	"	H.	104
Harrison ave.....	At Northampton st.....	"	"	L.	37
Northampton st...	Bet. Washington st. and Harrison ave.,	"	"	L.	697
Washington st....	" Water st. and Williams ct....	"	"	H.	130
Summer st....	At Washington st.....	"	"	H.	25
Washington st....	Between Norfolk pl. and Avon st....	"	"	H.	225
"	At south side of Summer st.....	"	"	H.	7
Bedford st.....	" Washington st.....	"	"	H.	20
Washington st....	" Essex st.....	"	"	L.	65
Essex st.....	Bet. Washington st. and Harrison ave.,	"	"	L.	5
Albany st.....	" E. Springfield and Mass. ave.....	"	"	L.	227
Washington st....	At Milk st.....	"	"	H.	7
"	Between Avon and Summer sts.....	"	"	H.	359
Temple pl.....	At Washington st.....	"	"	H.	36
Washington st....	" School st....	"	"	H.	12
School st.....	" Washington st.....	"	"	H.	31
Washington st....	Across Milk st.....	"	"	H.	20
Harrison ave.....	Bet. Northampton and E. Dedham sts..	"	"	L.	2,517
East Newton st....	At Harrison ave. (east side).....	"	"	L.	10
East Brookline st..	" " "	"	"	L.	8
Massachusetts av. (north side).....	" " "	"	"	L.	7
Franklin st.....	" Washington st.....	"	"	H.	24
Cross st.....	" Haymarket sq.....	"	"	L.	6
Washington st....	Between Essex st. and Hayward pl....	"	"	H.	20
Water st.....	" Washington and Devonshire sts...	"	"	L.	177
	<i>Carried forward</i>				5,364

Mains Abandoned.— *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				5,364
Spring lane.....	At Washington st.....	C.P.	12-in.	H.	34
Washington st....	Between School and Water sts.....	"	"	H.	10
"	" " " " "	"	"	H.	125
"	" Milk and School sts.....	"	"	H.	37
"	" " " " "	"	"	H.	30
Haskins st.....	At Ruggles st.....	Rox.	"	L.	7
Tremont st.....	" Huntington ave.....	"	"	H.	6
Fort ave.....	" Beech Glen st.	"	"	H.	6
Huntington entrance (west side).....	Bet. Huntington ave. and Fenway....	"	"	L.	720
Huntington entrance (east side).....	" " " " "	"	"	L.	250
Beacon st.....	At Audubon rd.....	"	"	L.	16
Ruggles st. (west side).....	Bet. Warwick st. and Oak Grove ter...	"	"	L.	352
Westminster st....	At Ruggles st.....	"	"	L.	30
Ruggles st.....	Bet. Oak Grove ter. and Auburn st....	"	"	L.	175
Vancouver st.....	At Ruggles st.....	"	"	L.	4
Humboldt ave.....	" Brookledge st.....	"	"	H.	5
Ruggles st.....	Bet. Auburn st. and Shawmut ave....	"	"	L.	125
Belgrade ave.....	West of Dudley ave., between Dudley ave. and Newburg st.	W.R.	"	H.	13
"	At Malcolm st.....	"	"	H.	6
"	East side of Rexhame st.....	"	"	H.	35
Hyde Park ave....	Bet. Mt. Hope st. and Hadwin way....	"	"	H.	1,550
Centrest.....	At Billings st.....	"	"	H.	20
Commonw'lth ave.	Between Harvard and Allston sts.....	Bri.	"	L.	5
Warren st.....	Between Cambridge st. and Commonwealth ave.....	"	"	H.	200
Dorchester ave....	At Codman st.....	Dor.	"	H.	15
Geneva ave....	Bet. Columbia rd. and R.R. bridge....	"	"	H.	138
Ballou ave.....	At Willowwood st.....	"	"	H.	18
Dorchester st.....	Near Fourth st.....	S.B.	"	L.	5
Sleeper st.....	At Congress st.....	"	"	L.	7
"	" "	"	"	L.	6
A st.....	" "	"	"	L.	17
	<i>Carried forward</i>				9,331

Mains Abandoned. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				9,331
Dover st.....	Under Fort Point channel (old syphon pipe).....	S.B.	12-in.	H.	175
Bennington st....	Across Neptune rd.....	E.B.	"	L.	34
"	At Bremen st.....	"	"	L.	200
Chelsea st.....	165 feet east of Curtis st.....	"	"	L.	12
Gove st.....	At Bremen st.....	"	"	L.	6
Water st.....	Between Wapping st. and Charles River ave.....	Chsn.	"	L.	200
Wapping st.....	At Water st.....	"	"	L.	28
Chelsea st.....	" Chambers st.....	"	"	L.	5
	Total, 12-inch.....				9,991
Avon pl.....	At Washington st.....	C.P.	10-in.	L.	10
Camden st.....	" Tremont st.....	"	"	L.	26
E. Springfield st..	" Albany st.....	"	"	L.	7
"	" Harrison ave.....	"	"	L.	5
Carver st.....	" Eliot st.....	"	"	L.	5
Belgrade ave.....	Between Corinth st. and Dudley ave..	W.R.	"	H.	183
Gove st.....	At Bremen st.....	E.B.	"	L.	8
	Total, 10-inch.....				244
Boylston sq.....	At Washington st.....	C.P.	8-in.	H.	22
Washington st....	Bet. Boylston and Beach sts.....	"	"	H.	16
Hayward pl.....	" Washington st. and Harrison ave..	"	"	H.	108
Federal st.....	At Milk st.....	"	"	L.	117
Tremont st.....	Bet. Head pl. and Boylston st.....	"	"	H.	150
Boylston st.....	" Tremont and Washington sts.....	"	"	H.	387
"	Across Tremont st.....	"	"	H.	22
Hayward pl.....	Bet. Washington st. and Harrison ave..	"	"	H.	19
Harrison ave.....	Near Beach st.....	"	"	L.	8
Boylston st.....	At Washington st.....	"	"	H.	35
Essex st.....	Bet. Washington and Oxford sts.....	"	"	L.	360
"	" Washington st. and Harrison ave.,	"	"	H.	185
Washington st....	" Summer and Franklin sts.....	"	"	H.	131
"	At north line of Essex st.....	"	"	H.	11
Essex st.....	" Washington st.....	"	"	L.	98
	<i>Carried forward</i>				1,669

Mains Abandoned. — Continued.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				1,669
Essex st.....	Bet. Washington st. and Harrison ave..	C.P.	8-in.	H.	46
Savoy st.....	“ “ “ “ ..	“	“	L.	332
Washington st....	Across Milk st.....	“	“	H.	28
Hayward pl.....	At Washington st.....	“	“	H.	90
Water st.....	Bet. Washington and Devonshire sts..	“	“	H.	150
Washington st....	Between Water st. and Court ave.....	“	“	H.	90
East Newton st....	At Harrison ave. (east side).....	“	“	L.	35
Eliot st.....	Between Washington and Pleasant sts.	“	“	L.	740
Calumet st.....	At Huntington ave.....	Rox.	“	H.	6
Belgrade ave.....	East side of Corinth st.....	W.R.	“	H.	15
Penfield st.....	At Belgrade ave.....	“	“	H.	15
Belgrade ave.....	Between Corinth st. and Dudley ave...	“	“	H.	1,205
Ashland st.....	Opposite No. 724.....	“	“	H.	36
Mendum st	Between Fairview and Walter sts.....	“	“	H.	132
Fairview st.....	“ Milwood and Mendum sts....	“	“	H.	83
Puritan ave.....	At Richmond st.....	Dor.	“	H.	10
Neptune rd.....	Between Orleans and Frankfort sts...	E.B.	“	L.	222
“	“ “ “ Bennington st...	“	“	L.	230
Curtis st.....	At Bremen st.....	“	“	L.	74
Bennington st....	Between Neptune rd. and Orleans st...	“	“	L.	257
Water st.....	Between Wapping st. and Charles River ave.....	Chsn.	“	L.	952
Charles River ave.	Between Water st. and water front....	“	“	L.	24
Pt. Shirley shore..	From Angle Post No. 130 to water's edge.....	Win.	“	L.	130
	Total, 8 inch.....				6,571
La Grange st....	At Washington st.....	C.P.	6-in.	L.	54
“	“ “ “	“	“	L.	90
Westfield st.	“ Tremont st.....	“	“	L.	9
Northampton st...	Across Tremont st.....	“	“	L.	25
Bumstead ct.....	At Boylston st.....	“	“	H.	14
Allen st.....	Between Blossom and Chambers sts...	“	“	L.	517
Village st.....	“ Dover and Castle sts.	“	“	L.	884
Paul st.....	Across Village st.....	“	“	L.	50
McLean st.	Between Blossom and Chambers sts...	“	“	L.	541
	<i>Carried forward</i>				2,184

Mains Abandoned. — *Continued.*

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				2,184
Division st.....	At Northampton st.....	C.P.	6-in.	L.	4
Reed st.....	“ “ “	“	“	L.	62
Harrison ave.....	“ Essex st.....	“	“	L.	30
Tileston st.....	Between Hanover and Salem sts.....	“	“	L.	592
Wiggin st.	At Tileston st.....	“	“	L.	3
Unity st.....	“ “ “	“	“	L.	8
Washington st. North	Between Cross and Stillman sts.....	“	“	L.	267
Stillman st.....	At Washington st. North.....	“	“	L.	27
Chatham st.....	Between Commercial st. and Merchants row.....	“	“	L.	569
Hanover st.....	Between Blackstone and Union sts....	“	“	L.	150
Tyler st.....	“ Beach and Harvard sts.....	“	“	L.	620
Avon st.....	At Washington st.....	“	“	H.	22
Milk st	“ “	“	“	H.	10
East Dedham st..	Across Harrison ave.....	“	“	L.	71
Sharon st.	At Harrison ave.....	“	“	L.	47
Massachusetts ave. (south side).....	“ “ “ (west side)	“	“	L.	20
Stoughton st.....	“ “ “	“	“	L.	50
Blackstone st.....	Between Hanover and Cross sts.....	“	“	L.	506
Eliot st.....	“ Washington and Pleasant sts.	“	“	L.	505
Warrenton st.....	At Eliot st	“	“	L.	61
St. Paul st.....	Near Falmouth st.....	Rox.	“	L.	23
Moreland st	Between Blue Hill ave. and Perrin st..	“	“	H.	290
Perrin st	“ Moreland and Waverly sts...	“	“	H.	369
Warwick st.....	At Ruggles st.....	“	“	L.	6
Waverly st.....	Between Perrin and Warren sts.....	“	“	H.	543
Perrin st	“ Moreland and Waverly sts...	“	“	H.	312
Rogers ave.....	Bet. Ruggles st. and Huntington ave..	“	“	L.	1,187
Bay View pl. . .	At Rogers ave.....	“	“	L.	12
Rogers ave	Bet. Bay View pl. and Ruggles st.....	“	“	L.	26
Perrin st.....	“ Alaska and Moreland sts.....	“	“	H.	451
Arundel st.....	At Mountfort st.....	“	“	L.	8
Ivy st.....	“ “	“	“	L.	8
	<i>Carried forward</i>				9,043

Mains Abandoned. — Continued.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				9,043
Oak Grove ter. . .	At Ruggles st.....	Rox.	6 in.	L.	10
Ruggles st.....	" Vancouver st.....	"	"	L.	7
Maple st.....	" Centre st.....	W.R.	"	H.	10
Amherst st.....	" Belgrade ave.....	"	"	H.	66
Rexhame st.....	" " "	"	"	H.	25
Lamartine st.....	Bet. Lamartine sq. and Lamartine pl..	"	"	H.	473
Kingsdale st.....	Off Bernard st.....	Dor.	"	H.	301
Vaughan st.....	At Geneva ave.....	"	"	H.	33
Greenwich st.....	Between Freeport and Duncan sts....	"	"	L.	869
Fenton pl.....	At Greenwich st.....	"	"	L.	6
Delhi st.....	Bet. Crossman st. and Oak Hill ave...	"	"	H.	87
Roslin st.....	At Montague st.....	"	"	H.	6
Kineo st.....	" Magnolia st.	"	"	H.	7
Park st.....	Bet. Clayton st. and Dorchester ave....	"	"	L.	621
Willowwood st....	" Dumas st. and Ballou ave.....	"	"	H.	30
Vaughan st.....	" Blue Hill ave. and Harvard st.....	"	"	H.	36
Rockford st.....	Off Dudley st.....	"	"	L.	135
"	Between Clifton and Dudley sts.....	"	"	L.	96
Fourth st.....	At B st.....	S.B.	"	L.	4
Sixth st.....	Between C and E sts.....	"	"	L.	1,172
E st	At Sixth st.....	"	"	L.	8
C st.....	" "	"	"	L.	8
Fourth st.....	Between E st. and Dorchester ave....	"	"	L.	1,184
E st.....	Across Fourth st.....	"	"	L.	56
Bennington st....	" Neptune rd.....	E.B.	"	L.	8
"	Between Swift and Orleans st.....	"	"	L.	594
"	At junction of Orleans st.....	"	"	L.	18
Bremen st.....	" Curtis st.....	"	"	L.	30
"	Between Maverick and Marion sts....	"	"	L.	2,150
Marion st	At Bremen st.....	"	"	L.	12
Mill st.....	Between Webster and Sumner sts.....	"	"	L.	302
Webster st	" Lewis and Mill sts.....	"	"	L.	415
Bennington st....	" Neptune rd. and Orleans st....	"	"	L.	379
Hudson st.....	" Chelsea and Water sts.....	Chsn.	"	L.	15
	<i>Carried forward</i>				18,216

Mains Abandoned. — Concluded.

LOCATION.		District.	Size.	Nominal Pressure.	Number of Feet.
	<i>Brought forward</i>				18,216
Foss st.....	Between Cheisea and Water sts.....	Chsn.	6-in.	L.	347
Charlestown bridge.....	Approach from Chambers st.....	"	"	L.	183
Chambers st.....	Between City sq. and Water st.....	"	"	L.	276
Warren ave.....	" Front st. and drawbridge.....	"	"	L.	235
Charles River ave.	" Water st. and water front	"	"	L.	267
Scott's ct.....	At Chelsea st.....	"	"	L.	30
Long Island.....	Opp. Gallop's Island.....	B.H.		H.	135
	Total 6-inch.....				19,689
McLean ct.....	At McLean st.....	C.P.	4-in.	L.	27
Salutation st.....	Between Hanover and Commercial sts.	"	"	L.	350
Harvard pl.....	At Washington st.....	"	"	H.	30
Delle ave.....	Between Parker and Burney sts.....	Rox.	"	H.	424
Essex st.....	At Commonwealth ave.....	Bri.	"	L.	9
Maudlin st.....	" Foss st.....	Chsn.	"	L.	31
	Total 4-inch				871
Hudson st.....	Between Chelsea and Water sts.....	Chsn.	3-in.	L.	280
Chelsea st.....	At Scott's ct.....	"	"	L.	11
	Total 3-inch.....				291
Hayward pl.....	Between Washington st. and Harrison ave.....	C.P.	2-in.	H.	193

Table showing Length of Distribution Mains Laid and Abandoned during the Year 1905, and the Total Length of the Distribution System of the City of Boston, January 31, 1906.

DIAMETER OF MAINS IN INCHES.																Totals.	
	48	42	40	36	30	28	24	20	16	12	10	8	6	4	3	2	
Total connected with sys- tem, January 31, 1905.....	33,494	16,813	23,104	43,157	88,379	244	80,275	94,015	193,644	1,165,792	131,443	585,325	1,333,682	87,039	6,829	4,951	3,888,126
Length laid during the year .....	.....	.....	.....	119	2,545	.....	753	1,815	6,698	23,820	11,387	14,546	3,454	9	474	1,070	66,650
Length abandoned during the year.....	.....	.....	.....	.....	1,787	.....	2,688	667	408	9,991	244	6,571	19,689	871	291	193	43,400
* Added to system.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,200	.....	.....	360	.....	238	.....	1,798
† Deducted from system....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,063	.....	1,133	8,117	14,306	541	500	26,060
Total connected with sys- tem, January 31, 1906.....	33,494	16,813	23,104	43,276	89,137	244	78,340	95,163	199,934	1,178,758	142,586	592,167	1,309,690	71,871	6,709	5,328	3,886,614 or 736.1 miles.

* The 12-inch and 6-inch items were erroneously recorded with the Western Division totals previously to 1897. In 1897 when the Western Division mains were transferred to the Metropolitan Water Board, these items were transferred with them. To correct the error they are now added to the system. The 3-inch item was laid in Roxbury in 1889, but for some unknown reason was dropped from total length in 1881. It is now restored.

† These lengths of pipe were classified by mistake in previous years as main pipe and recorded as such. They are properly service pipes and are now transferred to service pipe statistics.

Statement of Hydrant, Blow-off and Reservoir Pipes, January 31, 1906.

	DIAMETER IN INCHES.								Totals.
	16	12	10	9	8	6	4	3	
Total length connected with system, January 31, 1905.....	474	6,587	105	2,448	1,701	40,881	6,600	3	58,799
Length laid and relaid during the year.....	.....	52	.....	.....	123	1,187	30	41	1,433
Length abandoned during the year.....	.....	53	.....	.....	106	613	133	.....	905
Total length connected with system, January 31, 1906.....	474	6,586	105	2,448	1,718	41,455	6,497	44	59,327

Main Gates Established and Abandoned During the Year, and Number in System, January 31, 1906.

	DIAMETER IN INCHES.													Totals.
	48	40	36	30	24	20	16	12	10	8	6	4	3	
Total number in system, January 31, 1905.....	1	5	29	50	68	70	355	2,353	401	1,583	4,087	527	11	9,540
Number established during the year.....	.....	.....	.....	.....	3	.....	21	77	44	60	18	1	1	225
Number abandoned during the year.....	.....	.....	.....	.....	4	1	3	31	6	24	71	4	1	145
Total number in system, January 31, 1906.....	1	5	29	50	67	69	373	2,399	439	1,619	4,034	524	11	9,620

Private Gates.

	DIAMETER IN INCHES.		Totals.
	6	8	
Established during the year.....	2	1	3
Abandoned during the year.....	.....	.....	.....
Increase.....	2	1	3

Blow-off Gates.

	DIAMETER IN INCHES.				Totals.
	12	6	4	3	
Established during the year.....	1	4	3	1	9
Abandoned during the year.....	2	6	2	.....	10
Increase (+) or decrease (—)...	—1	—2	+1	+1	—1

Hydrant Gates.

	DIAMETER.	Totals.
	6 inches.	
Total number in system, January 31, 1905.....	8	8
Established during the year.....	5	5
Abandoned during the year.....	2	2
Total number in system, January 31, 1906.....	11	11

Private Hydrant Gates.

	DIAMETER.	Totals.
	6 Inches.	
Total number in system January 31, 1905.....	1	1
Established during the year.....		
Abandoned during the year.....		
Total number in system January 31, 1906.....	1	1

Hydrants Established and Abandoned during the Year.

	ESTABLISHED.							ABANDONED.						
	Lowry.	Boston Lowry.	Ordinary Post.	Bachelor Post.	Curtis.	Smith.	Totals.	Lowry.	Boston Lowry.	Ordinary Post.	Bachelor Post.	Boston.	Curtis.	Totals.
City Proper (public).....	26	1	1	25	...	...	53	28	...	3	8	5	...	44
Roxbury (public).....	...	3	8	16	...	...	27	12	2	3	...	1	...	18
West Roxbury (public).....	1	15	24	9	...	...	49	1	14	13	1	...	...	29
Brighton (public) ...	2	7	2	1	...	...	12	...	2	1	...	1	...	4
Dorchester (public).....	1	12	7	11	1	...	32	4	6	4	1	2	1	18
South Boston (public).....	...	1	...	21	...	1	23	6	...	5	4	3	...	18
East Boston (public)	2	5	3	5	...	...	15	3	3	...	1	...	...	7
Charlestown (public).....	3	1	...	13	...	...	17	7	...	4	1	...	...	12
Long Island (private).....	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Deer Island (private).....	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Total number of public.....	35	45	45	101	1	1	228	61	27	33	16	12	1	150
Total number of private.....	...	...	2	...	...	...	2	...	...	...	...	...	...	...

**Total Number of Hydrants connected with Distribution System,
January 31, 1906.**

	Lowry.	Boston Lowry.	Ordinary Post.	Batchelder Post.	Boston.	Smith.	Totals.
City Proper (public).....	631	48	256	418	121	.....	1,474
“ “ (private).....	4	.....	10	4	42	.....	60
Roxbury (public).....	505	92	438	223	42	.....	1,300
“ (private).....	2	1	.....	3	10	.....	16
West Roxbury (public).....	108	239	654	89	29	.....	1,119
“ “ (private).....	.....	.....	15	.....	1	.....	16
Brighton (public).....	73	87	391	25	20	.....	596
“ (private).....	.....	.....	7	.....	2	.....	9
Dorchester (public).....	417	237	974	219	28	.....	1,875
“ (private).....	.....	1	4	1	4	.....	10
South Boston (public).....	198	32	147	177	42	1	597
“ “ (private).....	3	.....	15	.....	28	.....	46
East Boston (public).....	124	29	192	65	7	.....	417
“ “ (private).....	8	.....	7	.....	25	.....	40
Charlestown (public).....	167	37	33	75	2	.....	314
“ (private).....	14	1	36	.....	6	.....	57
Deer Island (private).....	.....	.....	20	.....	.....	.....	20
Long Island (private).....	.....	.....	7	.....	.....	.....	7
Thompson's Island (private).....	.....	.....	2	.....	.....	.....	2
Gallop's Island (private).....	.....	.....	1	.....	1	.....	2
Rainsford Island (private).....	.....	3	1	.....	1	.....	5
Quincy.....	.....	1	11	.....	.....	.....	12
Brookline.....	.....	2	.....	.....	.....	.....	2
Total number of public hydrants.....	2,223	801	3,085	1,291	291	1	7,692
Total number of private and suburban hydrants.....	31	9	136	8	120	.....	304

Water Posts.**LOCATIONS OF WATER POSTS ESTABLISHED AND ABANDONED DURING THE YEAR.***Established.*

Alford street, near drawbridge, Charlestown side, Charlestown.
 Baker street, near Spring street, West Roxbury.
 Canterbury street, at Blue Hill avenue, West Roxbury.
 Central street, at Atlantic avenue, City Proper.
 Elm Hill avenue, opposite Wenonah street, Roxbury.
 Hyde Park avenue, at Stony Brook bridge, West Roxbury.
 Hyde Park avenue, opposite Neponset avenue, West Roxbury.
 Hyde Park avenue, opposite Patten street, West Roxbury.
 Seventh street, between B and C streets, South Boston.
 Southampton street, at Ellery street, South Boston.
 Washington street, near Morton street, West Roxbury.

Abandoned.

Alford street, opposite Almshouse, Charlestown.
 Atlantic avenue, at State street, City Proper.
 C street, at Seventh street, South Boston.
 Hyde Park avenue, opposite Walk Hill street, West Roxbury.
 McLellan avenue, corner Bradshaw street, Dorchester.
 Preble street, at Dorchester avenue, South Boston.
 Spring street, at Baker street, West Roxbury.
 Wales street and Blue Hill avenue, Dorchester.
 Warren street, at Chisholm park, Roxbury.
 Washington street, near Morton street, West Roxbury.

Table Showing Total Number of Water Posts Connected with System, January 31, 1906.

DISTRICTS.	Number connected with system, January 31, 1905.	Established during the year.	Abandoned during the year.	Number connected with system, January 31, 1906.
City Proper.....	77	1	1	77
Roxbury.....	81	1	1	81
West Roxbury.....	94	6	3	97
Brighton.....	54	.....	.....	54
Dorchester.....	110	.....	2	108
South Boston.....	40	2	2	40
East Boston.....	44	.....	.....	44
Charlestown.....	22	1	1	22
Totals.....	522	11	10	523

Fountains.*Established During the Year.**Style.*

- (C) Andrew square, South Boston.
 (E) No. 448 Broadway, South Boston.
 * (D) Centre street, at Mt. Vernon street, West Roxbury.
 (A) No. 2 Spring street, West Roxbury.

Abandoned During the Year.

- (C) Andrew square, South Boston.
 (E) No. 476 Broadway, South Boston.
 (A) Centre street, opposite Spring street, West Roxbury.
 (D) Chelsea street, at Mystic Playgrounds, Charlestown.
 (E) Eighth street, at gasometer, South Boston.
 (A) Leverett street, at Craigie's bridge, City Proper.

*This fountain was erected and given to the city by Mary Baker Chapter of D. A. R., October 23, 1905.

Number of Fountains in Service January 31, 1906.

DISTRICTS.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.	Totals.
City Proper.....	10	4	8	...	12	..	34
Roxbury.....	9	3	2	....	5	.....	19
West Roxbury.....	4	1	.....	2	2	.....	9
Brighton.....	5	.....	1	.....	.....	.....	6
Dorchester .....	.....	2	.....	1	.....	8	11
South Boston.....	3	1	3	.....	4	....	11
East Boston.....	... ..	4	3	.....	4	.....	11
Charlestown	1	3	.....	... ..	4	.....	8
Totals.....	32	18	17	3	31	8	109

Style.

NOTE.

- (A) Indicates fountains for man and beast, with automatic fixtures for man and beast in warm weather, and a continuous flow of water for beasts in cold weather.
 (B) Indicates fountains for beasts only. Continuous flow of water all the year.
 (C) Indicates fountains for man only. Automatic fixtures. In service during warm weather only.
 (D) Indicates fountains for man and beast. Automatic fixtures for both. In service during warm weather only.
 (E) Indicates cold water fountains for man only. Automatic fixtures. In service during warm weather only.
 (F) Indicates fountains for man and beast, with automatic fixtures for man in warm weather, and a continuous flow of water for beasts all the year.

Air Cocks.*Established.*

LOCATION.	District.	Diameter of Main.	Nominal Pressure.	Size of Air Cock.
Boylston st., bet. Bumstead ct. and Washington st....	C.P.	36-in.	Low	2-in.
Boylston st., opposite No. 17.....	"	30-in.	"	"
Washington st., opposite No. 224.....	"	24-in.	"	"
Codman st., 493 feet from gate at Washington st.....	Dor.	20-in.	High	"
Geneva ave., 200 feet south of railroad bridge.....	"	30-in.	"	"
Dover st., tunnel at westerly entrance.....	S.B.	20-in.	Low	"
Dover st., tunnel at easterly entrance.....	"	"	"	"
Dover st., tunnel at easterly entrance.....	"	12-in.	High	"
Dover st., tunnel at westerly entrance.....	"	"	"	"
Southampton st., at 2d waterway from Magazine st...	"	30-in.	Low	"
Southampton st., at 2d waterway from Magazine st...	"	16-in.	"	"
Southampton st., at N. Y., N. H. & H. R.R. bridge, near Ellery st.....	"	"	"	"
Hyde Park ave., over Stony brook.....	W.R.	12-in.	High	1-in.
Chelsea st., at Scott's ct.....	Chsn.	30-in.	Low	2-in.
Moon Island road, near connection with Thompson's Island pipe.....	Qui.	6-in.	High	1-in.
Bellevue st., between Bay and Green sts.....	"	2-in.	"	$\frac{5}{8}$ -in.

Abandoned.

Boylston st., bet. Bumstead ct. and Washington st....	C.P.	36-in.	Low.	2-in.
---	------	--------	------	-------

Blow-offs.*Established.*

LOCATION.	District.	Diameter of Main.	Nominal Pressure.	Size of Gate or Cock Controlling Blow-off.
Dedham st., at Harrison ave.....	C.P.	10-in.	Low	4-in.
East Newton st., at Harrison ave.....	"	12-in.	"	"
Spring lane, at Washington st	"	"	High	6-in.
Tremont st., at Camden st.....	"	20-in.	"	"
Tremont st., opposite No. 791.....	"	30-in.	Low	12-in.
Washington st., at Summer st	"	16-in.	High	6-in.
Rowen's ct., at end of main.....	W.R.	6-in.	"	1½-in.
Geneva ave., between Columbia rd. and Olney st., under R.R. bridge.....	Dor.	30-in.	"	6-in.
Charles River ave., at end of main	Chsn.	8-in.	Low	¾-in.
Mystic playgrounds at south shaft of Mystic tunnel..	"	30-in.	"	3-in.
Water st., at Foss st.....	"	16-in.	"	4-in.
Green st., between Bellevue st. and water's edge....	Qui.	2-in.	High	⅝-in.

Abandoned.

East Newton st., at Harrison ave.....	C.P.	12-in.	Low	12-in.
Harrison ave., at Dedham st.....	"	10-in.	"	4-in.
Tremont st., at Camden st.....	"	20-in.	High	6-in.
Washington st., at Essex st.....	"	12-in.	Low	"
Washington st., at Summer st.....	"	"	High	"
Charles River ave., between post hydrant and water front	Chsn.	6-in.	Low	"
Chelsea st., at Scott's ct.....	"	24-in.	"	"
Chelsea st., at Scott's ct.....	"	30-in.	"	12-in.
Under Chelsea bridge, at Pier No. 1.....	"	"	"	6-in.
Water st., at Foss st.....	"	12-in.	"	4-in.

Fire Reservoirs.

Connections with Boston Water Department system abandoned at:

Blossom street, at McLean street, City Proper.

Dorchester street, near Fourth street, South Boston.

Fourth street, at B street, South Boston.

Fourth street, between E street and Dorchester street, South Boston.

Franklin street, at Washington street, City Proper.

Harrison avenue, between East Canton and East Dedham streets, City Proper.

Warrenton street, at Eliot street, City Proper.
Washington street, between Milk and School streets, City Proper.
Waverly street, at Warren street, Roxbury.

Special Hydrants for Street Watering.

Abandoned.

Harrison avenue, between East Canton and East Dedham streets, City Proper.

Check Valves.

Established.

One 10-inch on salt water main, at Long Island, at pump house.

Reducing Valves.

Established.

One 8-inch on 12-inch line to Moon Island, at sewer gate house, opp. Squantum Inn, Squantum.

Total Number and Aggregate Length of Service Pipes of Various Sizes Connected with Distribution System, January 31, 1906.

16-inch.		12-inch.		10-inch.		8-inch.		6-inch.		4 inch.		3-inch		2 inch.		1½-inch.		1½-inch.		1-inch		¾-inch.		¾-inch.		¾-inch.		Totals.	
Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.
1	9	14	3,542	1	1,325	19	2,696	139	21,479	1,032	43,371	642	21,093	1,768	57,874	1,191	47,471	307	9,861	2,176	125,967	2,327	89,083	75,609	2,153,352	7,950	161,400	92,313	2,726,947

NOTE — In previous years, especially in the early years of the Department, many pipes that would now be termed service pipes were classified as main pipes, and recorded as such. A review of the records has disclosed them, and they are now transferred to the Service Pipe Totals, hence the variation in the total number of service pipes as indicated in the table above, from the numbers given in previous years.

**Maintenance Work of Miscellaneous Character Performed
During the Year Ending January 31, 1906.**

	Total Number during the year.
Boxes covering main pipe on bridges repaired	28
Brick gate chambers built, replacing wooden boxes	2
Dead ends blown off	442
Fountain repairs	217
Fountains and troughs cleaned and inspected	3,973
Gate box covers salted in cold weather	3,560
Gate box frames and covers renewed and marking of same changed	350
Gate boxes cleaned of mud, water and snow	431
Gate boxes inspected	1,382
Gate boxes raised or lowered	290
Gate boxes renewed	242
Gate boxes repaired	467
Gates in service oiled and tested for general efficiency	340
Gates inspected	1,875
Gates renewed on account of deterioration	2
Gates repaired	120
Hydrant barrels braced	41
Hydrant barrels changed on account of street grading	41
Hydrant barrels changed for various reasons	141
Hydrant box frames and covers renewed	180
Hydrant boxes cleaned of mud, water and snow	1,480
Hydrant boxes raised or lowered	159
Hydrant boxes renewed	384
Hydrant boxes repaired	294
Hydrant caps changed from old to new style	290
Hydrant inspections in cold weather	132,994
Hydrant nipples recut to change thread	1,085
Hydrants hayed in cold weather	256
Hydrants in service oiled and <u>tested</u> for general efficiency	2,459
Hydrants painted	1,115
Hydrants repaired	447
Hydrants thawed out	27
Investigations made where further action on part of Water Department was unnecessary	976
Locations of gates marked	11,242
Main pipe repairs, caused by :	
Blasting	14
Broken pipe	30
Burst pipe	3
Frost	6
Joints blown out	5
Joints drawn	36
Joints leaking	123
No cause assigned	24

	Total Number during the year.
Pick-hole	2
Settlement	40
Sewer construction	1
Split pipe	2
Tide	1
Vibration	6
Pavement repairs	1,659
Salt (sacks of) purchased and delivered to Fire Department	4,550
Service pipe repairs caused by :	
Blasting	7
Broken by driving piles	1
Broken by foundation wall	29
Broken by steam-roller	10
Defective couplings	130
Defective joints	38
Defective packing	7
Defective pipes	320
Eaten by ashes	8
Eaten by earth	2
Eaten by lime	1
Electrolytic action	19
Frost	158
Gnawed by rats	3
Main cocks required renewal	63
Main uprights missing	10
Main uprights required renewal	47
Operations of Boston Consolidated Gas Company	8
Operations of Boston Elevated Railway Company	2
Operations of Boston Transit Commission	321
Operations of Sewer Department and its agents	83
Pipe stolen	6
Settlement of earth	211
Settlement of service boxes on pipes	18
Sidewalk cocks missing	175
Sidewalk cocks required renewal	315
Sidewalk uprights above and below grade	7,642
Sidewalk uprights in way of edgestones	17
Sidewalk uprights inspected	10,085
Sidewalk uprights required renewal	398
Stopped by dirt	213
Stopped by fish	36
Stopped by gasket	4
Stopped by rust	290
Struck by pick	113
Worn out	7
Service pipes changed from tin-lined to all lead	3
Service pipes extended on account of street widening	22
Service pipes lowered as a protection from frost	1

	Total Number during the year.
Service pipes lowered on account of change in street grade	14
Service pipes moved from way of various corporations .	4
Service pipes raised on account of change in street grade	3
Service pipes shut off and let on to permit owners to make repairs	1,059
Sidewalk cocks and uprights given to individuals to apply to private pipes	25
Temperature of water in cold water fountains taken in summer season	1,748
Water post repairs of various kinds	688
Water posts shut off and let on during cold weather .	1,930
Wooden plugs set in main uprights	70

**Statement of Stock Manufactured from the Rough in the
Machine Shop, Blacksmith Shop and Carpenter Shop During
the Year Ending January 31, 1906.**

MACHINE AND BLACKSMITH SHOPS.

Bolts:		Jointers:	
Lowry hydrant	600	6-inch	13
Post "	676	8 "	14
Boston Lowry hydrant	231	10 "	9
Lowry extension	16	12 "	12
Post "	30	16 "	4
$\frac{7}{8}$ -inch x $1\frac{1}{4}$ -inch	4	20 "	6
$\frac{7}{8}$ " x 5 "	5	24 "	2
1 " x 8 "	6	30 "	1
1 " x 9 "	2	Nipples, combination:	
$1\frac{1}{4}$ " x 10 "	3	2-inch	33
$1\frac{1}{4}$ " x $10\frac{1}{2}$ "	2	Nipples, meter:	
Cocks, angle:		$\frac{5}{8}$ -inch	39
$\frac{5}{8}$ -inch	21	1 "	50
Cocks, corporation:		$1\frac{1}{2}$ "	152
$\frac{5}{8}$ -inch	1,226	2 "	165
1 "	123	Nipples, solder:	
$1\frac{1}{2}$ "	86	$\frac{5}{8}$ -inch	60
Cocks, fountain	47	1 "	18
Cocks, sidewalk:		$1\frac{1}{4}$ "	9
$\frac{5}{8}$ -inch	1,141	2 "	50
$\frac{3}{4}$ "	99	Nuts, fountain cock	
1 "	36	Nuts, combination:	
Cocks, water post:		2-inch	5
$1\frac{1}{2}$ -inch	27	Nuts, coupling:	
Couplings, combination:		$\frac{1}{2}$ -inch	12
$\frac{3}{4}$ -inch	48	$\frac{5}{8}$ "	3,526
Couplings, hose:		$\frac{3}{4}$ "	370
2-inch, female	74	1 "	138
Couplings, male:		$1\frac{1}{2}$ "	216
$\frac{1}{2}$ -inch	94	2 "	130
$\frac{5}{8}$ "	629	Plugs, iron:	
$\frac{3}{4}$ "	151	$\frac{5}{8}$ -inch	9
Gate-pins		$\frac{3}{4}$ "	1
Gates:		1 "	3
3-inch	12	Pump clappers	
4 "	30	Reducers, meter:	
6 "	20	$\frac{5}{8}$ -inch	23
8 "	45	$\frac{3}{4}$ "	69
10 "	28	1 "	108
12 "	59	$\frac{3}{4}$ " to $\frac{5}{8}$ inch	72
16 "	7	Set screws:	
20 "	7	$\frac{7}{8}$ -inch	910
24 "	2	1 "	65
Hydrant wastes		Sidewalk bushings	
Hydrants:		Tubes, coupling:	
Bachelor post	74	$\frac{5}{8}$ -inch	3,307
Lowry	78	$\frac{3}{4}$ "	315
Boston Lowry	25	1 "	159
		$1\frac{1}{2}$ "	100
		2 "	120

CARPENTER SHOP.

Boxes:		Box pieces:	
Boston hydrant	36	Gate box —	
Boston Lowry hydrant	73	4-inch	100
Gate, large	49	6 "	16
" small	600	9 "	6
Lowry hydrant	135	Box pieces:	
Post hydrant	410	Lowry hydrant —	
Box pieces:		1-inch	424
Boston hydrant —		2 "	385
1-inch	100	3 "	153
2 "	75	6 "	20
3 "	25	9 "	15
9 "	12	12 "	1
10 "	6	Box tops:	
12 "	1	Boston hydrant	31
Gate box —		Gate, large	36
1-inch	965	" small	218
2 "	445	Lowry hydrant	61
3 "	346	Post hydrant	122
		Wooden horses	88

OLD STOCK RENOVATED BY MACHINE AND BLACKSMITH SHOPS.

Bolts:		Hydrants:	
Boston Lowry hydrant	22	Boston	4
Lowry hydrant	6	Boston Lowry	23
Post	15	Lowry	54
Cocks, angle:		Post, Batchelder	82
$\frac{5}{8}$ -inch	12	Nipples, meter:	
Cocks, corporation:		1-inch	1
$\frac{5}{8}$ -inch	10	1 $\frac{1}{2}$ "	2
1 $\frac{1}{2}$ "	19	2 "	10
Cocks, sidewalk:		Nipples, solder:	
$\frac{5}{8}$ -inch	40	2-inch	1
Couplings, male:		Nuts, coupling:	
1-inch	2	$\frac{1}{2}$ -inch	5
1 $\frac{1}{2}$ "	1	$\frac{5}{8}$ "	989
Gates:		$\frac{3}{4}$ "	339
4-inch	10	1 "	48
6 "	17	1 $\frac{1}{4}$ "	4
8 "	12	1 $\frac{1}{2}$ "	21
10 "	2	2 "	20
12 "	12	Tubes, coupling:	
16 "	3	$\frac{5}{8}$ -inch	522
Smith	5	$\frac{3}{4}$ "	11
Hydrant wastes	76	1 "	5
		1 $\frac{1}{2}$ "	11

In addition to the foregoing, the machine, carpenter, paint, plumbing and blacksmith shops performed much work of miscellaneous nature in the maintenance and improvement of the property of the Water Department. Some of the important items are as follows :

Made 1,077 tools of various kind (derricks, rammers, wedges, etc.)	Aggregate cost	\$2,081 06
Repaired and painted wagons, carriages and sleighs.		
Aggregate cost		1,127 56

Repaired tools of all kinds	\$1,272 79
Sharpened 18,450 picks, 2,165 bars and 1,207 chisels.	
Aggregate cost	1,118 98
Made seventeen patterns for castings. Aggregate	
cost	451 87
Made repairs in stables throughout department. Ag-	
gregate cost	399 59
Scraped and painted old pipes. Aggregate cost .	343 23
Made repairs of various kind in and around shops.	
Aggregate cost	324 02
Performed twenty-three odd jobs for Engineering	
Department. Aggregate cost	264 79
Repaired and painted tool houses. Aggregate cost .	256 90
Repaired and painted fences at Brighton yard, Parker	
Hill, Fisher Hill and Brookline reservoirs. Ag-	
gregate cost	253 22
Painted signs at Long, Moon, Rainsford and Gallop's	
islands. Aggregate cost	244 23
Performed twenty odd jobs for Meter Department.	
Aggregate cost	228 25
Painted and whitewashed office and machine shops.	
Aggregate cost	225 52
Made repairs on property at East Boston, Dor-	
chester, Charlestown and West Roxbury. Aggre-	
gate cost	472 83

REPORT OF THE ENGINEER.

CITY OF BOSTON,
ENGINEERING DEPARTMENT,
CITY HALL, March 1, 1906.

WILLIAM J. WELCH, ESQ.,

Water Commissioner :

DEAR SIR, — I herewith submit a report of the most important work done under the supervision of the Engineering Department during the past year. The policy of providing permanent, accessible structures in which to carry water pipes under navigable channels was continued. Owing to the proposed widening of the draw of Dover-street bridge it became necessary to abandon the 24-inch low service and 16-inch high service siphons at that point; and to replace them a brick conduit was built south of the old location with a distance of 100 feet between the centres of its shafts; its horizontal portion is circular, 8 feet in diameter in the clear, with 12-inch brick walls, and with its top at grade —35, the present bottom of channel being at grade —18; the shafts, extending upwards at each side of draw opening to grade —15.5, are circular, 7 feet 4 inches in diameter in the clear, with 16-inch brick walls inclosed in a steel cylinder $\frac{1}{2}$ inch thick from their top to a point about 10 feet below surface of ground; to prevent injury from impact of passing vessels, fenders were built around the shafts. The work was done by means of compressed air, the excavated material being rather soft blue clay with sand seams; 20-inch low service and 16-inch high service pipes were laid in the conduit and the old siphons were abandoned. A conduit was also built in tunnel in Charlestown, extending from the Mystic playground under the south channel of Mystic river to the Boston & Maine railroad property, a distance of 567 feet; it is circular in form, 7 feet in diameter, with 12-inch brick walls; the top of brick work under the channel is at grade —39, the bottom of channel being at grade —17.5. The excavation was made in rather stiff blue clay with sand seams and occasional boulders, except for a distance of about 100 feet where sand, gravel and loose stones were encountered; air pressure was

used throughout the work. A 30-inch pipe was laid in the conduit connecting at the northerly end with 24-inch and 30-inch mains, and extending, at the southerly end, through the Mystic playground to a connection at Scott's court with the 20-inch and 24-inch mains in Chelsea street, a distance of 1,015 feet. The completion of this work ensures, under ordinary circumstances, a sufficient service for the large interests situated between the north and south channels of Mystic river; the old mains, crossing the channel, which were abandoned, have for several years past been a cause for anxiety, as they were seriously weakened by the effect of salt water and one of them had twice been put out of service by frost.

The work of relaying the Tremont-street low service main was continued, 860 feet of pipe southerly from Northampton street being relaid. .

On Southampton street the 24-inch steel pipe, crossing the second waterway easterly from Magazine street, was replaced with 30-inch cast-iron pipe supported on piles.

A large amount of miscellaneous work was done in connection with the construction of the subway in Washington street; the connection over the subway between the 36-inch main laid in Essex street in 1904 and the 30-inch main in Boylston street, was made with 30-inch cast-iron flanged pipe, jointed with rubber gaskets; in a distance of 76 feet a curvature of 166 degrees was made, the flanged pipe forming in effect a long "special" and making the problem of caring for the unbalanced pressures a simple one.

The 24-inch main in Washington street between Water street and Court avenue, laid in 1849, was replaced with new pipe, as it was in poor condition and it was necessary to support it in the subway excavation during construction.

In addition to the above a very large number of changes in distribution pipes and in services were made on account of subway construction, in fact work of some kind was practically continuous throughout the year.

The 30-inch high service main in Geneva avenue, Dorchester, was lowered for a distance of 343 feet between Columbia road and Olney street to conform to the new grade of the street under the New York, New Haven & Hartford railway bridge. A 20-inch high service main was laid in Codman street, Dorchester, from the 30-inch main in Washington street to Dorchester avenue, reinforcing the distribution system at that point. The practice of relaying small mains with pipes adequate for the demands of modern fire service has been continued.

In Charlestown a 16-inch main was laid in Water and Chamber streets, replacing 8-inch and 12-inch pipe and affording an ample fire supply for the neighborhood as well as for the extensive fire system installed by the Boston & Maine railway in the Hoosac docks. This system, the first of its kind in Boston, promises to be effective. It is a force pipe system, the fire engines pumping water from the city mains directly into the private pipes, which are large enough to furnish effective fire streams at distances from the engines, impossible with ordinary fire hose. In the South End 2,242 feet of 16-inch pipe was laid in Harrison avenue, northerly from Northampton street, replacing a 12-inch line which was in very bad condition.

Some other streets relaid with 12-inch and 10-inch pipe are as follows: Allen, Blossom to Chambers; Tileston, Hanover to Salem; Blackstone, Hanover to Cross; Chatham, Commercial to Merchants row; Tyler, Beach to Harvard; Eliot, Washington to Pleasant; Savoy, Washington to Harrison avenue; Northampton, Washington to Harrison avenue; Village, Dover to Castle; Rogers avenue, Ruggles to Huntington avenue; Greenwich, Freeport to Duncan; Park, Clayton to within 380 feet of Dorchester avenue; Moreland, Blue Hill avenue to Perrin; Perrin, Moreland to Waverly; Waverly, Perrin to Warren; Belgrade avenue, Corinth to Dudley avenue; Sixth street, C to E; Mill, Webster to Sumner; Webster, Mill to Lewis; Foss, Chelsea to Water.

The total amount of relaying done was as follows:

4,753 feet of 16-inch pipe, replacing 6, 8 and 12 inch pipe.									
10,343	"	"	12	"	"	"	6, 8	"	10
6,135	"	"	10	"	"	"	4, 6	"	8
2,675	"	"	8	"	"	"	4	"	6

Eleven contracts for rock excavation have been made during the year. Sixty-nine petitions for main pipe extensions have been considered and reported upon in regard to grade, size of pipe, etc. A large number of miscellaneous investigations and reports have been made in regard to changes in location of main pipes and hydrants, changes of service, etc.

All main pipe hydrants, gates, etc., have been located as they were laid and the plans of the same have been kept closely up to date. Substantial progress has been made towards the completion of sectional plans of the pipe system and of contour plans of the city on a scale of 200 feet to an inch.

Careful tests of the quality of iron and composition furnished have been made.

The results of electrical surveys and investigations, made throughout the city, again prove conclusively that electric currents of varying strength are present, practically everywhere, on the water pipes ; while actual instances of damage resulting from electrolysis have been found, during the year, in the case of a few lead services only, yet the existing conditions are a constant menace to the life of the water pipes, and more serious damage may well be resulting than has yet been discovered.

Respectfully submitted,

WILLIAM JACKSON,
City Engineer.

GENERAL STATISTICS.

BOSTON WATER DEPARTMENT.

Daily average amount used (gallons).	89,743,900
Daily average amount used through meters during 1905 (gallons).	17,384,100
Number of services February 1, 1906	92,313
Number of meters in service February 1, 1906	4,990
Number of meters under supervision February 1, 1906	122
Number of elevators under supervision February 1, 1906	590
Length of supply and distributing mains in miles February 1, 1906	736.1
Number of public hydrants in use February 1, 1906	7,692
Yearly revenue from annual water rates (assessed)	\$1,331,990 07
Yearly revenue from metered water (assessed)	\$1,113,763 05
Percentage of total revenue from metered water,	45.5
Yearly expense of maintenance	\$586,891 39

Average Stated Monthly Heights, in Feet, above City Base, to which Water Rose at Different Stations, on the Boston Water Works.

Monthly Rainfall in Inches During 1905 in Various Places in Eastern Massachusetts.

PLACES.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Framingham	5.30	2.12	3.21	2.66	1.23	5.03	5.21	2.54	7.16	1.41	1.94	4.02	41.83
Dam 4, Ashland.....	5.28	2.00	3.10	2.48	1.46	4.46	4.96	2.70	6.97	1.52	2.06	3.94	40.93
Cordaville	5.27	2.08	3.01	2.95	1.28	5.64	5.38	2.94	7.31	1.79	2.33	4.24	44.22
Lake Cochituate.....	5.40	2.00	3.28	2.87	1.57	5.46	3.24	2.89	7.00	1.35	2.07	4.07	41.20
Chestnut Hill Reservoir.....	5.49	2.27	3.34	3.08	1.65	5.38	1.92	3.47	5.93	1.53	2.51	4.27	40.84
Spot Pond	5.61	1.94	3.28	2.54	1.39	5.71	1.01	3.66	7.61	1.41	2.63	3.96	40.75
Cambridge Observatory.....	6.13	1.93	2.86	2.63	1.53	4.30	1.07	3.04	5.99	1.23	2.24	3.65	36.60
Waltham, Boston Manufacturing Company.....	5.11	1.09	3.25	3.15	1.73	4.52	1.20	3.30	5.40	1.52	2.34	4.79	37.40
Lowell, Locks and Canals Company.....	6.96	1.71	3.71	2.15	1.29	5.18	0.59	4.50	6.39	1.33	2.25	3.86	39.92
Main Drainage Yard, 795 Massachusetts avenue....	3.40	1.65	2.66	3.03	1.58	5.22	1.40	3.29	5.27	1.42	2.40	3.29	34.61
Average of above ten places.....	5.40	1.88	3.17	2.75	1.47	5.09	2.60	3.23	6.50	1.45	2.28	4.01	39.83

¹BOSTON WATER BOARD,
ORGANIZED JULY 31, 1876.

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- * TIMOTHY T. SAWYER, from July 31, 1876, to May 5, 1879; and from May 1, 1882, to May 4, 1883.
 * LEONARD R. CUTTER, from July 31, 1876, to May 4, 1883.
 * ALBERT STANWOOD, from July 31, 1876, to May 7, 1883.
 * FRANCIS THOMPSON, from May 5, 1879, to May 1, 1882.
 WILLIAM A. SIMMONS, from May 7, 1883, to August 18, 1885.
 GEORGE M. HOBBS, from May 4, 1883, to May 4, 1885.
 JOHN G. BLAKE, from May 4, 1883, to August 18, 1885.
 WILLIAM B. SMART, from May 4, 1885, to March 18, 1889.
 * HORACE T. ROCKWELL, from August 25, 1885, to April 25, 1888.³
 THOMAS F. DOHERTY, from August 26, 1885, to May 5, 1890; and from May 4, 1891, to July 1, 1895.
 ROBERT GRANT, from April 25, 1888, to July 17, 1893.³
 PHILIP J. DOHERTY, from March 18, 1889, to May 4, 1891.
 * JOHN W. LEIGHTON, from May 5, 1890, to July 1, 1895.
 WILLIAM S. McNARY, from August 15, 1893, to November 5, 1894.³
 CHARLES W. SMITH, from January 23, 1895, to July 1, 1895.
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¹WATER COMMISSIONERS.

- CHARLES W. SMITH, from July 1, 1895, to January 20, 1896.³
 JEREMIAH J. MCCARTHY (Acting), from January 20, to February 1, 1896.
 JOHN R. MURPHY, from February 1, 1896, to October 17, 1899.³
 BENJAMIN W. WELLS (Acting), from October 17, 1899, to December 28, 1899.
 * AUGUSTUS P. MARTIN, from December 28, 1899, to March 13, 1902.²
 JAMES DONOVAN (Acting), from March 14 to 17, 1902.
 EUGENE S. SULLIVAN, from March 17, 1902, to January 11, 1906.³
 WILLIAM JACKSON (Acting), from January 11, 1906, to present time.

Assistant Water Commissioners.

- JEREMIAH J. MCCARTHY, from July 1, 1895, to January 20, 1896.
 EDWARD C. ELLIS, from February 17, 1896, to November 1, 1900.
 * MELVIN P. FREEMAN, from February 7, 1900, to March 9, 1902.³
 WILLIAM H. OAKES, from November 1, 1900, to March 9, 1902.³
 EUGENE S. SULLIVAN, from March 10 to March 17, 1902.
 ISAAC ROSNOSKY, from March 10, 1902, to present time.
 JOHN J. LEAHY, from March 21, 1902, to present time.

Chief Clerk and Secretary.

WAITER E. SWAN.

General Superintendent Income Division.

JOS. H. CALDWELL.

Superintendent Distribution Division.

WILLIAM J. WELCH.

City Engineer and Engineer of the Department.

WILLIAM JACKSON.

¹ Under chapter 449 of the Acts of 1895 the Boston Water Board was abolished, and the Water Supply and Water Income Departments consolidated and placed under the charge of one Water Commissioner.

* Deceased.

² Died in office.

³ Resigned.

